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The OIL WEEKLY

OIL and GAS ENGINEERING

FOR OIL AND GAS PRODUCTION AND PIPE LINE DIVISIONS

THE WEEK'S NEWS INTERPRETED

OCTOBER 17, 1932
Page 67 Number 5

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MANUFACTURING CHEMISTS
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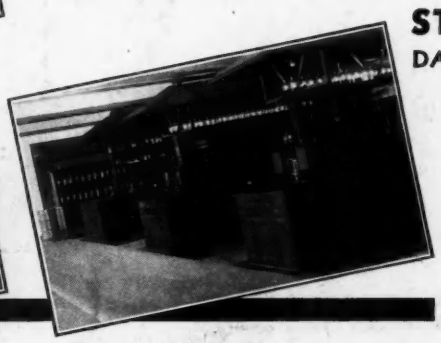
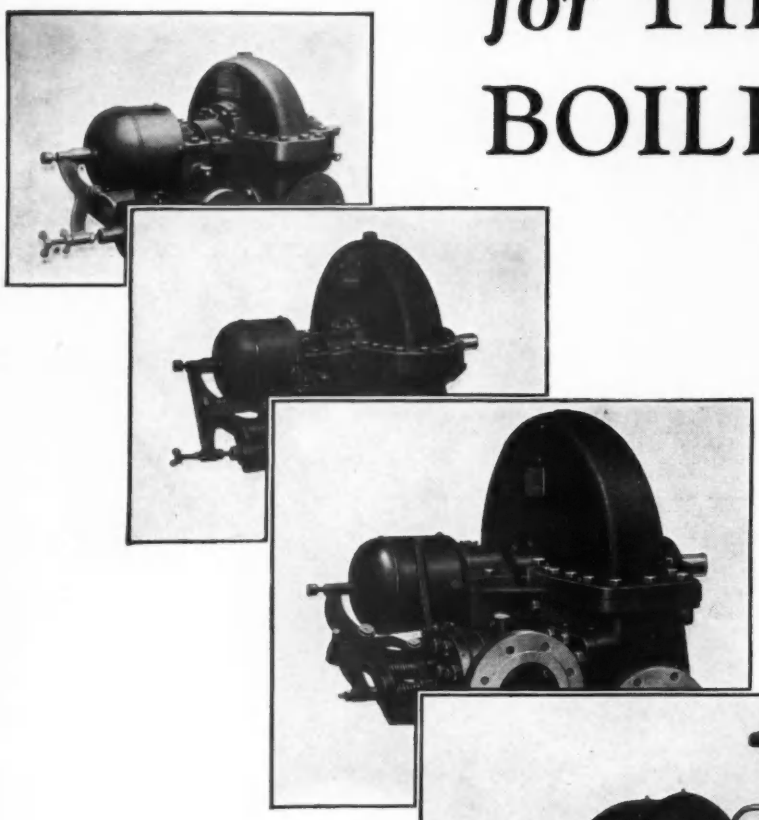


*Photographs shown here are from laboratories of the St. Louis plant.

Mechanical-Drive Turbines for TIRED BOILER PLANTS



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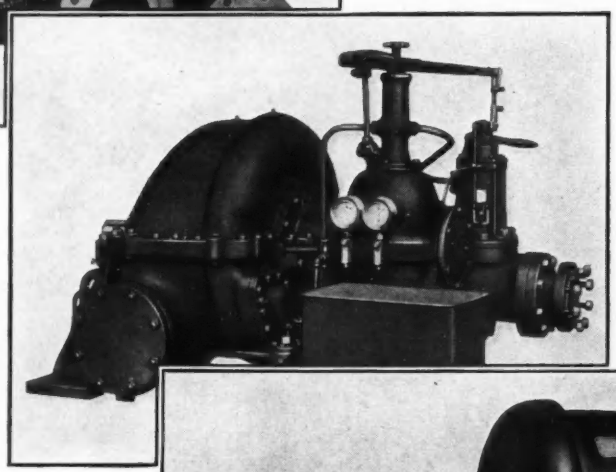

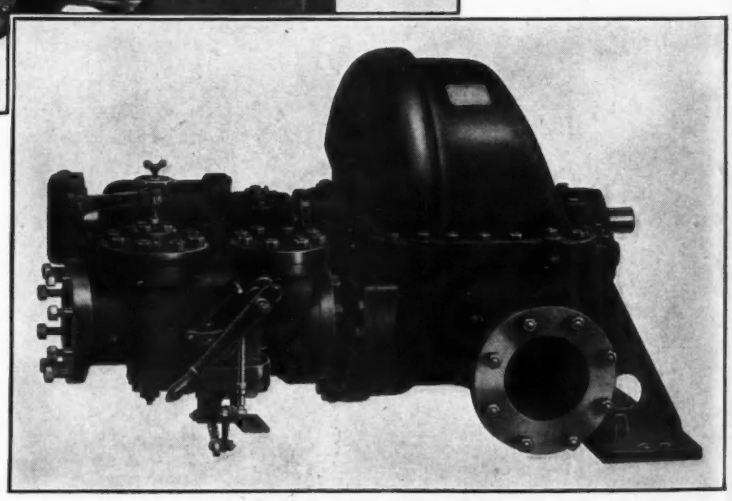

Have You Considered Turbines for:

Boiler-feed pumps
Condensate pumps
Forced-draft fans
Fuel-oil-circulating pumps
Gas boosters
Gas extractors
Induced-draft fans
Pumping stations
Tar pumps
Water-circulating pumps

175-53

GENERAL ELECTRIC

The OIL WEEKLY. Issued weekly by the Gulf Publishing Co., 3301 Buffalo Drive, Houston, Texas. Subscription price $1.00 per year; 15 cents per copy. Entered as second-class mail matter December 23, 1916, at the post office at Houston, Texas, under act of March 3, 1879.

5 good REASONS . . .

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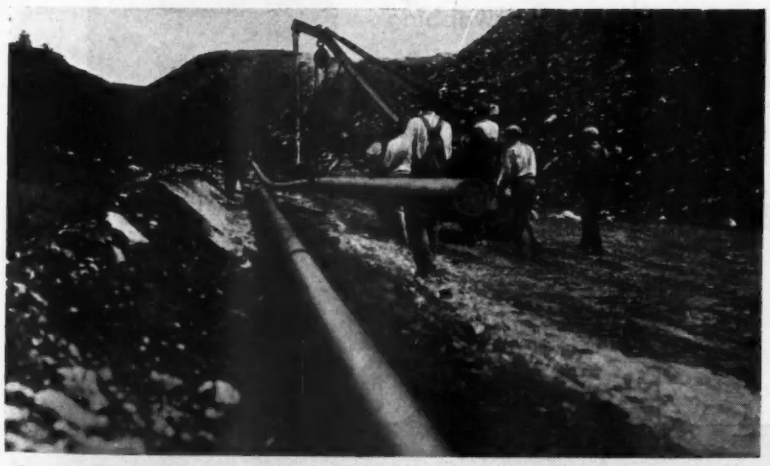
5 CAN BE USED WITHOUT CLEANING . .



Constructing gasoline pipe line from Borger, Texas, to St. Louis, Missouri, for Phillips Petroleum Company, using Republic Electric Weld Pipe

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REPUBLIC STEEL CORPORATION

GENERAL OFFICES YOUNGSTOWN, OHIO

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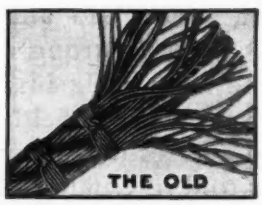

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THE OIL WEEKLY

October 17, 1932
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S. W. ROBINSON
Editor

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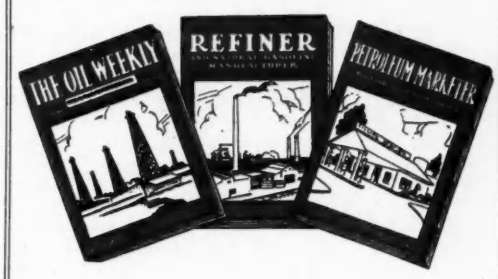

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THE OIL WEEKLY

FOR OIL AND GAS PRODUCTION AND
PIPE LINE DIVISIONS

ENGINEERING • NEWS • STATISTICS

Let's Make It Stick

To those who say that there is no justification for the price raise in crude oil instituted early last week by Sun Oil Company and followed by other companies, THE OIL WEEKLY believes that a brief resume of the current situation will be of interest. To those who feel that the mere posting of a price increase will cure the industry's ills, THE OIL WEEKLY would like to suggest a word of caution.

It is true that the price increase came at a time when the market was soft. But it is true, also, that the market was soft because more oil was being produced than there was reasonable need for.

"But if distress oil production, largely in East Texas, can be improved, reduced enough, or eliminated," reasoned many, "then the general situation would show immediate improvement."

But how to alleviate the distress production was the question.

A price increase would compensate for a reduction in allowable, many argued.

"If my price were better I could afford to take less oil out of the ground," reasoned the producer.

"If I can get regular connections at a fair price then I will not have facing me the necessity of seeking a casual connection at a price ruinous to me and the market," reasoned another.

So the cart was put before the horse, as it were, and in these days of hectic happenings in the oil industry no one need sneer at a new precedent being set.

The reasoning is not illogical. Eliminate the need or the desire to produce more than the market can absorb, by increasing the price, and the market warrants a price increase.

What would a price *decrease* have gotten anybody anyway?

It would not have eliminated any distress oil. It would simply have resulted in the sale of that same amount of oil still at a price under the posted price, because that is where the distress oil and the illegitimately produced oil has been going. A crude price decrease would have wrecked the gasoline market—already soft. Nobody would have been helped—all would have been hurt.

THE OIL WEEKLY is glad to see the courage expressed through the price increases. It hopes that those companies which have not yet announced the increase will do so.

But it has a word of warning to offer.

Now that the incentive to willingness for further reductions in crude production has been offered the reduction must either come or the increase will not stick.

If there are any wells in East Texas not yet having connections, arrangements should be made at once to provide such connections. If proper steps have not been taken by the Texas Railroad Commission to stop the illegitimate production of oil there, they should be taken to the full extent of the commission's powers. We believe that the commission in Texas will do all that it can. But facing the possibility of an adverse court decision on East Texas production at the hands of the federal court which has a proration order of the commission under consideration, we hope that all the parties involved in East Texas can be thoroughly sold on the advisability of substituting harmonious co-operation for injunction suits.

Taking a long range view of the oil business in the United States it is folly to produce and sell crude oil and gasoline at prices representing a loss. The oil is going to be needed—every barrel in East Texas and elsewhere. THE OIL WEEKLY believes that the need for this oil will come much sooner than some people will admit.

Industry Profits As Price

Price Increase Met *by Majors and Spread to* All Mid-Continent Areas

PRODUCERS in Arkansas, the Mid-Continent, West Texas, Southwest Texas, the Panhandle and in New Mexico have benefitted from the initiative of Sun Oil Company in posting a 10-cent advance in the price of crude in the Gulf Coast and a 12-cent advance in East Texas. Purchasers outside of the areas affected by Sun Oil Company's posting were quick to follow the lead, and resultant increases of from nine to 12 cents were made effective October 15, seven a.m., in Arkansas, the Mid-Continent, North Louisiana, the Panhandle, West Texas and New Mexico, and Southwest, transforming a spirit of localized optimism and cheerfulness to one of national scope.

The Texas Company, after following Sun Oil Company's lead in East Texas, was the first to break out of the traces and spread the advance, increasing West Texas, (including Lea County, New Mexico), Darst Creek, and the Gulf Coast, 10 cents, increasing Carson and Hutchinson Counties nine cents, and Gray County 11 cents. At the same time this purchaser brought Arkansas into the general advance with a 12-cent increase for Smackover crude, then spread the good news with a similar advance to its customers in North, North Central and Central Texas.

Sinclair Prairie Oil Marketing Company, in meeting Sun Oil Company's East Texas advance took a path untouched by The Texas Company, carrying the increase into the Mid-Continent, posting a top price of $1.12 for 40 gravity and above in Kansas and Oklahoma, North and Central Texas, with a two-cent differential downward for each degree gravity below 40 in Oklahoma and Kansas. Phillips Petroleum Company, Barnsdall Refining Company, Continental Oil Company, Kanotex Refining Company, and Pure Oil Company joined the general move.

Only one major purchaser in the areas where crude prices were advanced had not followed the lead October 14. That was the Humble Oil & Refining Company. This organization is known to have an appreciable volume of crude stocks on hand, more than 4,000,000 barrels in Gulf Coast alone, and it is reasonable to expect it will not overlook the obvious advantage to inventory of meeting the advance.

Other East Texas purchasers who have met the advance are Shell Petroleum Corporation, Gulf Refining Company, Empire Gas & Fuel Company, Panola Pipe Line Company, Arkansas Fuel Oil Company, and Magnolia Petroleum Company.

Gulf Refining Company's announcement generally met advances elsewhere in fields where it purchases and posted 85 cents for Salt Flat. Magnolia Petroleum Com-

Price Advance in Crude Oil October 15, 1932

Purchaser—	Amount of Increase	Area Applied to
Sun Oil Company	12 cents	East Texas
	10 cents	Gulf Coast
Shell Peroleum Corp.	12 cents	East Texas and met all general advances throughout Texas, Kansas and Oklahoma
The Texas Company	12 cents	East Texas
	10 cents	West Texas, Including Lea County, New Mexico
	10 cents	Darst Creek
	12 cents	Smackover
	12 cents	North Texas, North Central Texas, Central Texas
	11 cents	Gray County
	9 cents	Carson and Hutchinson Counties
	10 cents	Gulf Coast, with 25 gravity and below at 90 cents, with 1-cent differential up to top of $1.10
Sinclair Prairie Oil Marketing Company	12 cents	East Texas, North and Central Texas, Kansas and Oklahoma, with a top of $1.12 for Oklahoma and Kansas on the 40 and above gravity.
White Eagle Oil Corp.	12 cents	Met all general advances in Kansas
Empire Gas & Fuel Co.	12 cents	East Texas
Panola Pipe Line Co.	12 cents	East Texas
Arkansas Fuel Oil Co.	12 cents	East Texas
Continental Oil Co.	12 cents	East Texas, North Central Texas, Kansas and Oklahoma
	9 to 12 cents	In other areas where it purchases, in line with The Texas Company postings
Barnsdall Refining Co.	9 to 12 cents	All areas of Mid-Continent and Texas in which it purchases
Phillips Petroleum Co.	9 to 12 cents	All areas in Mid-Continent and Texas in which it purchases
Kanotex Refining Co.	12 cents	All areas in Kansas
Pure Oil Co. (Kansas-Oklahoma Division)	9 to 12 cents	Mid-Continent and Texas
Magnolia Petroleum Co.	9 to 12 cents	Adopted Texas Co.'s schedule for Oklahoma, North Central, West Central Texas, except for below 28 gravity, which is 79 cents, 28 to 28.9 is 80 cents with 2 cents differential
	10 cents	Mirando, Smackover, Darst Creek.
	12 cents	North Louisiana. Lockport and Iowa districts, top $1.10 Cameron Meadows, top $1.00 Luling and Corsicana heavy 74 cents.
Gulf Refining Co.	12 cents	North La., and El Dorado, Ark.
	10 cents	Smackover
	9 to 12 cents	All prices in Texas advanced to meet Sun et al.
Gypsy Oil Corp.		Met all Oklahoma and Kansas advances

Increase Balances Proration

pany's announcement met advances elsewhere and posted a price of 90 cents on Mirando crude.

The initiative of Sun Oil Company in advancing the price of East Texas and the Gulf Coast presents an interesting move. The organization has no retail outlets in the areas it advanced, so the advance could not be construed as a gesture for public favor. Another rather unusual angle to its policy is that Sun Oil Company is a much greater purchaser of crude than a producer of crude in East Texas and the Gulf Coast.

Sun Oil Company ranks among the leading purchasers of crude in the East Texas oil field, holding connections through the Sun Pipe Line Company with 666 wells. Of this number outside well connections represent an aggregate of about 430, and the remainder are on controlled properties. In addition to the above connections, Sun Pipe Line Company is transporting crude from 161 flowing wells held by the Yount-Lee Oil Company to be delivered to the latter's tank farm and terminals near Beaumont.

In the Gulf Coast area, Sun Oil Company is producing and purchasing about 17,000 barrels of crude daily, and its own production represents about 3500 barrels daily.

The advance in East Texas and Gulf Coast crude prices followed shortly the recent action of the Texas Railroad Commission which reduced the allowable production of the state by 117,352 barrels, of which 40,000 barrels represented the reduction in the East Texas field allowable. J. Edgar Pew, vice president of Sun Oil Company, in discussing the advance, is quoted as having said, "We must pay a price for crude oil high enough to encourage producers' adherence to lawful conservation."

Humble Action in Reduced Buying Helped Price Hike

Fort Worth, Texas.—Unanimous adoption of the crude price increase put into effect by a number of purchasing companies in Texas on October 15 largely depends on the movement receiving the support of the major company that indirectly caused a downward revision of production of all important fields in the state, thus paving the way for a price adjustment. Humble Oil & Refining Company, largest purchaser of crude in Texas, holds the power to defeat, or assure the price increase just as its part payment and storage plan of buying in three districts since September 1 served as a general warning of an impending crude price cut. Although the company's abbreviated oil buying policy has been severely criticized by some of the affected operators, it was a major factor in arousing the interest of all operators as to the necessity of reducing the output of the state to a near balance with the seasonal demand.

An almost united front has been built up by operators and companies in the state to resist the threatened cut in crude prices as evidenced by the acceptance of a general reduction in production allowables provided for in the revised proration orders issued by the Texas Railroad Commission last week. Humble Oil & Refining Company sustained a greater loss in production than any single concern as result of this curtailment.

The part payment and storage plan enforced by Humble Oil & Refining Company originated through the unpopular order issued by the commission giving the East Texas oil field a maximum allowable of 375,000 barrels daily between September 1 and October 16. Refusal of the latter concern to pay for more than 50 per cent of the outside oil accepted and also on royalty oil from its controlled leases during the September 1-15 period, and not more than 60 per cent since September 15, was generally accepted as conclusive proof that a price cut was pending.

Standard of Indiana's Position

Standard Oil Company (Indiana) gives several reasons why the price of crude oil should not go up and why even the prices it is now paying are unwarranted.

Among those reasons are: Price cutting in the oil business. More gasoline being refined than is needed. Crude oil being illegally run. Excessive taxes.

One cannot understand how the Indiana Company thinks that a reduction in the price of crude oil will alleviate any of the ills mentioned above.

If the price is cut below the posted price, as the company indicates would be the thing to do, the same amount of distressed oil undoubtedly would seek a market at a price lower than the posted price. The history of the oil industry in East Texas proves that. And no improvement in the gasoline price can be expected to come if crude prices are reduced. On the other hand an improvement has already been noted in the gasoline market as a result of the crude increase. It seems obvious that with the crude market shot to pieces the gasoline market would tobboggan even more.

Reduction in the price of crude oil would tend to increase rather than decrease the amount of oil run to refineries. An increase in price certainly would not have a tendency to increase runs.

Of course illegally produced oil should not be produced, but the great temptation for producing oil illegally is based on a need for money or need for connections at the posted price. Cutting the price wouldn't help; raising the price will.

Finally it looks a little far fetched to assume that reducing the price or failing to increase the price of crude oil will alleviate tax evasion.

Just what does Standard Oil Company (Indiana) mean by the last paragraph of its statement? "The sound road toward better prices for both crude and finished products is by way of first correction of the fundamental conditions which will control eventually," says the statement. It is to be assumed that the reasons outlined by the company are the "fundamental reasons" referred to. We will grant that all of those things ought to be corrected. Standard Oil Company (Indiana) has put its fingers on some of the ills of the industry. Hasty action is to be condemned, too, of course. We thought that when the Indiana Company took a hasty stand on a two-cent reduction on 100-gallon gasoline contracts a few weeks ago, a position they gave up shortly after they announced the policy.

But apparently the company has failed to see that the price increase comes as a gesture of cooperation on the part of the purchasers to help alleviate the things that make for a lower market. Standard Oil Company (Indiana) has tried the opposite way in the past now we believe that the company can afford to reverse itself and do something to help the situation by a method other than cutting prices.

Operators Get More Money For Less Oil *With Output Balanced*

MORE money for less oil was in prospect for producers of crude in Texas and the Mid-Continent following orders of the Texas Railroad Commission reducing the allowable production in Texas to 804,801 barrels daily, a reduction of 127,649 barrels from the previous official allowable figures and 121,149 barrels less than production during the week ending October 8. Led by Sun Oil Company, a general price increase, notably 12 cents in East Texas, became effective with the new allowable figure October 15.

Under this adjustment of production and prices, Texas producers will get slightly more money for their oil and the privilege of reserving in the ground more than 100,000 barrels of oil that is not needed on the present market and for which a higher price may be expected ultimately.

In Oklahoma the new allowable will be a reduction of about 16,000 barrels, and the new price schedule will mean, to producers, about $30,000 more money for less oil. In Kansas the new prices will mean an increase in revenue of around $12,000, with corresponding increases in Louisiana and Arkansas.

News of the pending price increase had an immediate effect upon the gasoline market in the Mid-Continent. Buyers who were seeking to force the market on low octane fuels down to 3⅛ cents early in the week rushed in orders on news of the crude increase, with the result that the price was up a half-cent to 3⅝ cents, with some refiners asking four cents. Better grades of gasoline moved up a quarter-cent and to firmness.

Following a state-wide hearing at Austin October 8, the Texas Railroad Commission issued a complete new schedule of allowables for Texas, cutting production 121,395 barrels per day. A statement issued by the commission shows that for the week ending September 24, the daily average production for the state was 913,100 barrels,* while the new allowables permit production of 791,705 barrels.

New allowables have been set for every

* American Petroleum Institute estimate.

Texas Comparative Production Schedule

District or Field	New Allowable	Old Allowablee	Reduction in Allowable	Production Oct. 8 (A.P.I.)	Indicated Reduction in Production
Panhandle	45,000	*50,000	5,000	41,700	
North Central Texas	46,000	57,000	11,000	49,350	3,350
West Central Texas	21,500	30,000	8,500	24,350	2,850
Yates	55,000	65,000	10,000	65,300	10,300
Winkler	25,000	35,000	10,000	29,150	4,150
Howard-Glasscock	12,500	*15,000	2,500	15,250	2,750
Ector County	4,000	*4,073	73	4,050	50
Crane-Upton	12,700	*13,259	559	18,700	6,000
Reagan County	20,000	25,000	5,000	22,400	2,400
Other Fields	12,500	12,668	168	15,150	2,650
Total West Texas	141,700	170,000	28,300	170,000	28,300
Darst Creek	14,000	18,000	4,000	16,500	2,500
Salt Flat	7,500	10,000	2,500	7,800	300
Duval	5,000	7,481	2,481	....	....
Other Fields	22,450	*29,269	6,819	....	....
Total Southwest Texas	48,950	*54,750	5,800	53,500	4,550
Van	42,500	*45,000	2,500	47,250	4,750
Other Fields	6,700	....	....	7,000	300
Total East Central	49,200	....	....	54,250	5,050
East Texas	335,000	375,000	40,000	394,150	59,150
Thompson (Rabb Ridge)	6,000	....	....	....	....
Conroe	4,800	....	....	13,500	8,700
Raccoon Bend	4,250	6,500	2,250	4,850	600
Sugarland	8,000	12,000	4,000	10,000	2,000
Barbers Hill	19,108	....	....	24,900	5,892
Goose Creek	3,210	....	....	....	....
High Island	5,159	....	....	....	....
Hull	5,159	....	....	....	....
Humble	5,128	....	....	....	....
Pettus	3,822	....	....	....	....
Pierce Junction	4,688	....	....	....	....
Refugio	7,701	....	....	8,600	899
Spindletop	2,760	....	....	....	....
Other Fields	37,666	....	....	....	....
Total Gulf Coast	117,451	*144,000	26,549	138,650	21,199
Total Texas	804,801	932,450	127,649	925,950	121,149

*A.P.I. Estimate of Production week ending September 24.

*Official allowables were Panhandle 55,000; Howard-Glasscock 22,000; Ector County 6,310, and Crane-Upton 16,700, but the figures shown are production as nominated by purchasers taking the oil.

Effect of Price Increase

Old Average Posted Price	New Average Posted Price	Difference in Average Daily Revenue
$.75	$.85	+$4,170.00
.92	1.04	+ 2,438.00
.92	1.04	— 42.00
.65	.75	— 4,225.00
.82	.92	+ 1,164.00
.92	1.04	+ 3,328.00
.98	1.10	+ 1,000.00
.90	1.00	— 7,234.00

field in the state, with a very few minor exceptions in marginal fields. Twelve fields in the Gulf Coast area, the smaller fields of West Texas, East Central Texas and Southwest Texas, have definite limits of production under the new plan.

The per well allowable in the East Texas field was automatically reduced to 40 barrels per day under the terms of the new allowable of 335,000 barrels.

Operators presented a united front for the first time in more than two years. Details of the allowables had apparently been prepared beforehand, as little evidence was presented and this was not seriously contested.

Commission Enjoined From Enforcing New Allowables

Austin, Texas.—An order restraining the Texas Railroad Commission from enforcing proration restrictions on the Texas Panhandle oil properties of Danciger Oil & Refining Company of Texas was issued by the Supreme Court here October 13. A special order calling for the enforcement of proration on this company's properties was included by the commission along with those released October 10 involving a reduced output of all important oil areas in the state. This is the only instance that resistance to the new orders has been shown by producers, although another producing-refining unit in the Panhandle has threatened to seek the same relief.

The commission's latest order directed at Danciger Oil & Refining Company sought to terminate an agreement whereby the company is to be exempt from proration restrictions pending the appeal period of its court attack on proration. The company has a wide open production of about 4000 barrels of crude daily in the Panhandle.

Danciger Oil & Refining Company launched its attack on proration when a temporary injunction was procured here September 25, 1930, in Fifty-Third District Court. This court refused to make the injunction permanent in a decision given February 13, 1931, but the court of appeals reversed the decision. The case is now awaiting action of the supreme court, which announced last week that it had been advanced on the docket. An old agreement made by the state permitting the plaintiff to produce unrestricted during this appeal period resulted in all adjoining well owners being given the same consideration. However, the commission recalled this exemption privilege for the neighboring lease owners effective October 11. The only recourse left open to these abutting property owners now is to seek an injunction, or file suit for excess drainage damages against Danciger Oil & Refining Company. Several suits of this nature have been filed in East Texas lately.

Texas Commission Files Charges on Illicit Oil

Austin, Texas, October 14.—The Texas Railroad Commission continues to show proof of its desire to stop the flow of illicit oil from the East Texas field, and it provided evidence used by the state here October 14 in filing suits for damages and also restraining orders against 12 independent producers, pipe line companies and brokers. The injunctions were granted by District Court Judge J. D. Moore against E. R. Liner, Incorporated, Mission Oil Company, C. Ellzey, Y Oil & Gas Company, Arkansas Producing Company, Harry Ginsberg, J. G. Pundt, Globe Pipe Line Company, Wales Pipe Line Company, Selaw Pipe Line Company, Selaw Transportation Company, and the Zenith Corporation.

Texas Independents Meet At Fort Worth December 9

Fort Worth, Texas.—The Independent Petroleum Association of Texas will hold its third annual meeting here December 9, according to Claude C. Wild, executive vice president. This strictly independent organization has been prominently identified since its inception in sponsoring state legislation on oil and gas matters.

Independent Association Meets at Tulsa November 14

Tulsa.—Independent Petroleum Association of America has announced its annual meeting to be held at the Mayo Hotel here at 10 a.m., November 14. A special train is being arranged to leave Tulsa at 6 p.m. on November 14 to arrive in Houston on the morning of November 15, enabling those who attend the meeting at Tulsa to be at the opening of the American Petroleum Institute annual meeting on the latter date.

A. P. I. Directors Meet At Excelsior Springs

Excelsior Springs, Missouri.—Amos Beaty, president of the American Petroleum Institute, the board of directors of which gathered here for meeting October 13, is quoted as saying "The control of production to harmonize with present day demand is being worked out. Prices have advanced, and some favorable trends have been showing up in the oil fields."

Directors of the Institute were in session October 12 and 13 to discuss problems confronting the industry, and possibly plans for the annual meeting of the American Petroleum Institute scheduled to be held in Houston, Texas, November 15, 16 and 17.

Oklahoma Expects 15,000 Barrel Cut in New Allowables

OKLAHOMA CITY.—Following a hearing Monday, October 10, the Oklahoma Corporation Commission was preparing a new order which will govern Oklahoma for the last quarter of the year. According to nominations in the various pools it was evident that a cut of 15,000 barrels or more would have to be made. Since the dispute between operators in the Oklahoma City pool and those in the Seminole district has continually gotten farther from settlement due to drastic cuts in Oklahoma City allowable without appreciable reductions in Seminole, it was felt that the former area should not be asked this time to bear almost the entire burden. Ray M. Collins asked that Class B pools be reduced from 44 to 41 per pent of potential, which is being done in the new order. The following table shows allowable for the state for October compared with that of the preceding month:

Classification or District—	October Allowable	September Allowable	Difference
Class A	24,864	24,652	212 increase
Class B	118,290	130,488	12,198 decrease
Class C	14,700	15,707	1,007 decrease
Oklahoma City	72,750	75,720	2,970 decrease
Wildcats	1,050	800	250 increase
Others	150,136	150,347	211 decrease
Totals	381,790	397,715	15,925 decrease

New Venezuelan Field *Producing High Gravity Oil from* Shallow Sands

RECENT discovery of a shallow high gravity oil field in the State of Falcon, Venezuela, by Standard Oil Company of Venezuela, offers one of the most interesting studies in the development of the oil industry in that country. The field lies within four kilometers of the sea coast and has the advantage of being at a sufficient elevation to allow the oil to flow by gravity from practically the entire producing area to storage tanks on the beach. It is located about three kilometers southeast of the town of Cumareba in the district of Zamora which is itself a port on the Caribbean Sea.

The oil from this field ranges from 48° to 60° A.P.I. gravity. Tests have shown that the oil contains approximately 50 per cent gasoline and has high grade lubricating qualities. Production so far has been obtained from six different horizons with the first sand at approximately 550 feet and the deepest at 1472 feet. The discovery well was spudded with the expectation of striking a productive sand at or around 4000 feet. Up to the present, however, all attempts to reach this depth have been unsuccessful owning to the lack of sufficiently modern equipment to handle the blowouts in the shallower sands. The pressures, so far encountered, range from 250 pounds in the upper sands to 900 pounds in the lower sands. The formations are largely of shale and broken sands.

The structure is estimated as being close to three kilometers in length and slightly more than one kilometer in width. The southern limit ends in an escarpment and the eastern side is bounded by high hills. The northern and western sides slope toward the coast. The accompanying sketch shows its location with its present development.

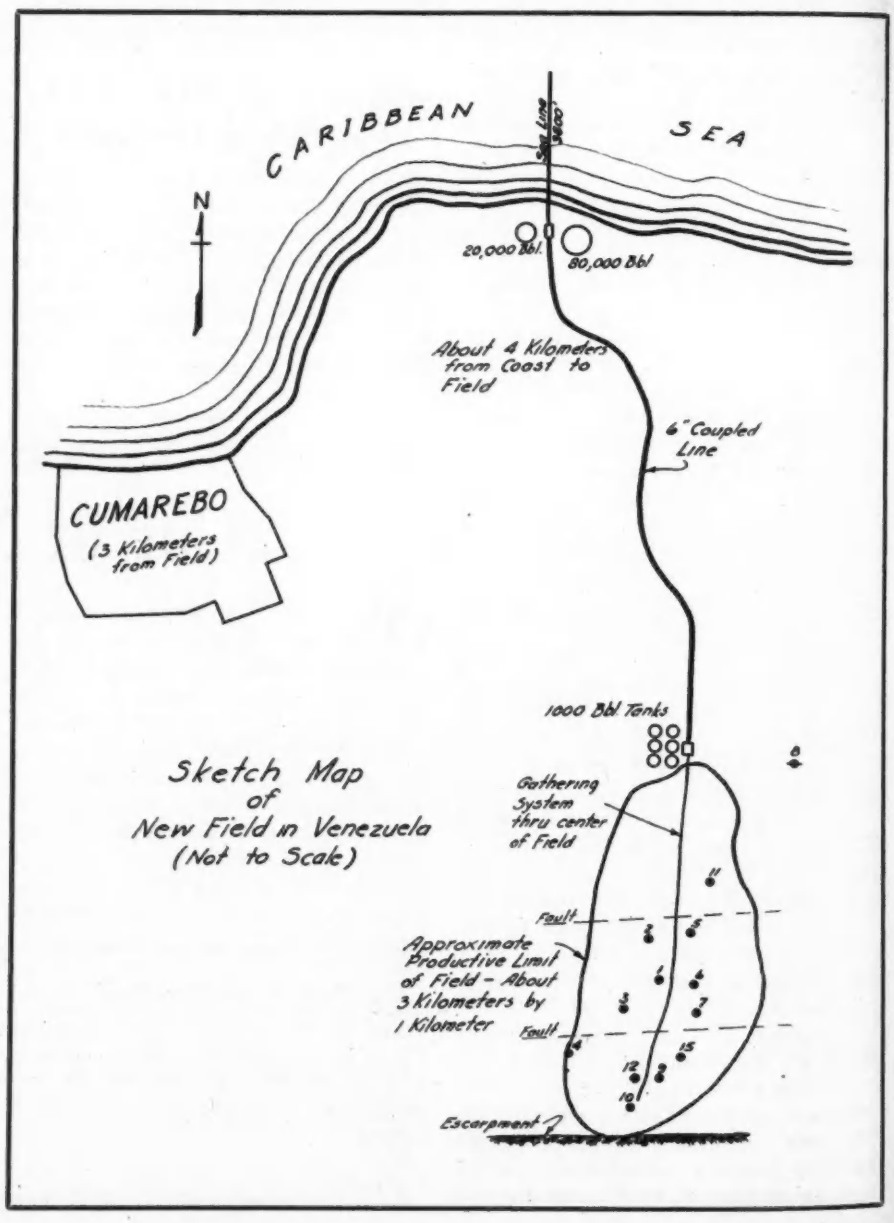
Planned Deeper Test

The discovery well located on the theoretical axis of the structure was spudded in May, 1931, with the intention of drilling to 5000 feet. At a depth of 567 feet it blew out; and was then tested while flowing from the casing and through small chokes. The initial production under these conditions was at 300 barrels a day. Tubing was later run into the hole and the well put on a 30-day production test. During that period it averaged approximately 280 barrels per day through chokes ranging from one fourth-inch to three eighths-inch. The casing pressures averaged around 250 pounds and the bottom hole pressure, taken after the well had produced 30 days, showed an average of 380 pounds. The hole was without a liner and its bottom was found to be at only 550 feet since it had been filled up to that point by cavings.

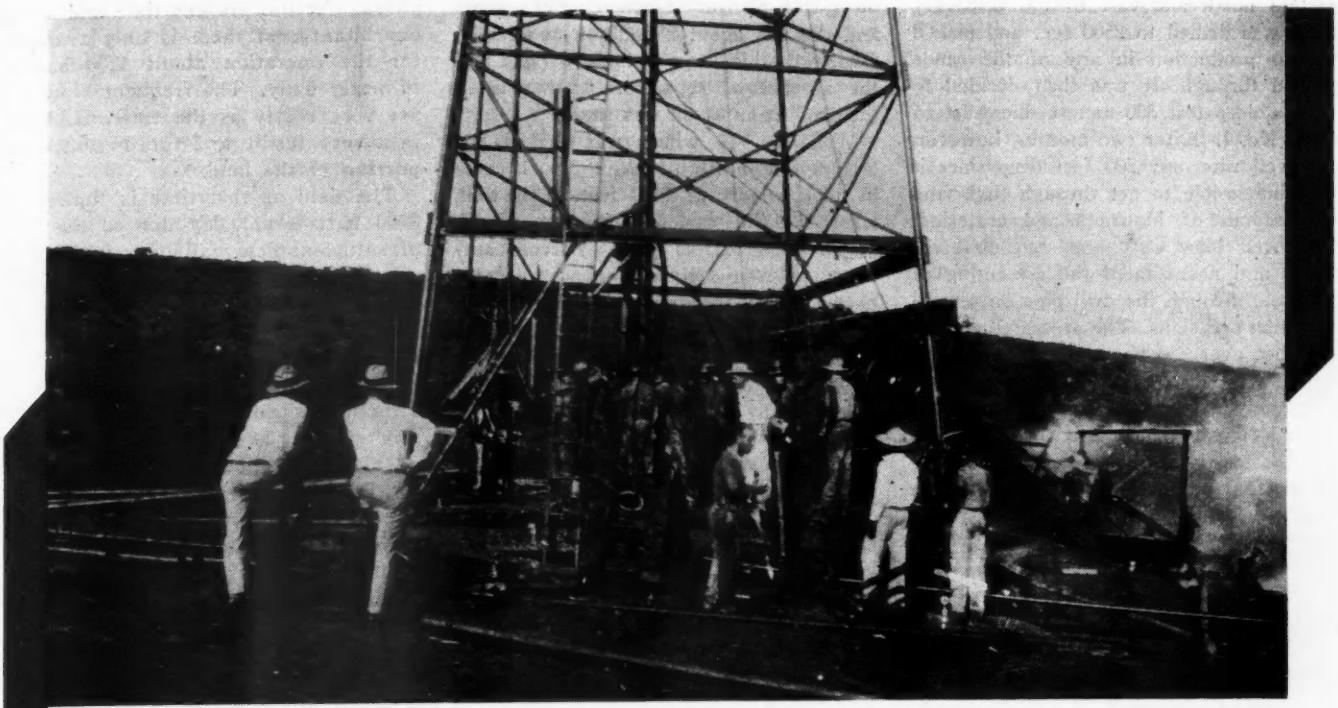
The rig was then moved about 800 meters due north of this discovery well and a second attempt was made to drill a deep test. The upper sand encountered in the discovery well proved here to be non-productive, and small showings only were met at the 750- and 1100-foot horizons which later produced oil in other wells. Upon reaching a depth of about 1425 feet, broken oil saturated sand was cored; and while coring at 1472 feet the well threatened to blow out. A drill pipe test was made at this point and the well produced nearly 500 barrels per day through a three eighths-inch choke. Following this test the well was killed and 8¼-inch liner with one fourth-inch perforations on three-inch centers and two-inch tubing were inserted with the tubing being hung nearly 40 feet off bottom. The hole produced when put on a 30-day production test an average of 320 barrels per day through one eighths-inch and one fourth-inch chokes. The casing and tubing pressures averaged around 350 pounds and 460 pounds respectively.

Well No. 3 was drilled approximately 400 meters south and slightly west of well No. 1 with the intention of producing it from the 500-foot sand. It came in after some difficulty for an estimated 250 barrels. Salt water which blew out and necessitated setting a water string was encountered at 200 feet.

The fourth well drilled to ascertain the western flank of the structure was located approximately 800 meters south and west of Well No. 3. No oil bearing sand was



Sketch Map of New Field in Venezuela (Not to Scale)

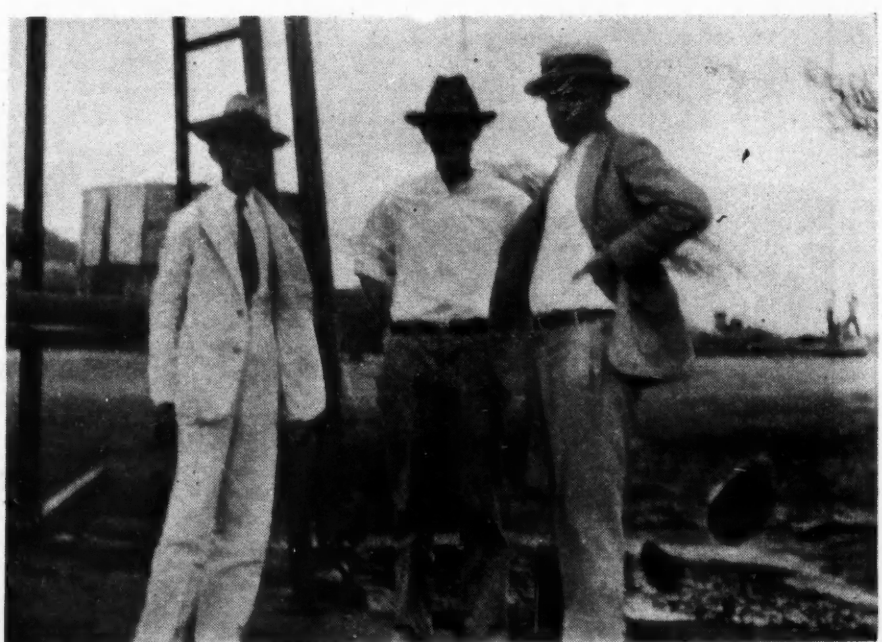


Closing the valve on Well No. 4, Cumarebo Field after blowing for twelve hours.

found until a depth of 1100 feet was reached. While coring the hole at this depth it blew out with the drill pipe still in the hole, but unequipped with blowout preventer or valve. At the time it was estimated that it was making 5000 barrels of high gravity oil and ten million cubic feet of gas. It took about 15 hours to get on a valve and shut the well in. The difficulty was that in backing off the Kelly the pipe hung on the elevators and the table. After killing the well the drill pipe was recovered and 4¾-inch liner and two-inch tubing inserted, the tubing hanging two feet off bottom. Landing the tubing and liner was attended by good fortune since the hole was constantly threatening to blow out again. The well on test proved to be making about a thousand barrels of oil and three million cubic feet of gas per day through a five sixteenth-inch choke. Casing and tubing pressures were 580 pounds and 670 pounds, respectively, but increased gradually with the production.

To determine the eastern edge of the structure, Well No. 5 was located approximately 700 meters north and east of Well No. 1. The upper sand was encountered here and tested but soon began making around 50 per cent water which was believed to be coming from an upper water sand. A peculiar thing here was that a heavy flow of salt water was found at 40 feet. The well was then shut in to await the return of the drilling crew for deepening and soon appeared to go dead. As there was no tubing head available when the well was tested from the casing, the test was made through the medium of a McClatchie cement head. While the well was shut in it became necessary to utilize this and upon attempting to change the cement head for a valve the well, which had remained apparently dead up to that time blew out without warning and flowed wild for 12 hours. Upon resuming drilling, circulation was lost at 700 feet. After using all the available mud and colloidals some progress was made until a depth of 900 feet was reached; and then it blew out through the drill pipe. It was then found that the hole had bridged at about 850 feet. It was impossible to pull the drill pipe so, with the bridge cutting off the upper water and oil sands, it was left in the hole on the blowout preventer and the well produced through it. On a production test it produced 1400 barrels per day with a drill pipe pressure of 550 pounds. The casing naturally showed no pressure.

Well No. 8, located about three kilo-



Left to right: Dr. Iturbe, one of the three ministers of hydrocarbons of Venezuela; Bill Gray, field superintendent for Standard Oil Company of Venezuela; and a Venezuelan petroleum engineer, assistant to Dr. Iturbe.

meters north and east of the discovery well, was drilled to 2500 feet and picked up no production in any of the sands passed through. It was then decided to drill a deep test 300 meters due west of Well No. 1. After two months, however, the well was only 500 feet deep since it was impossible to get through that sand on account of blowouts and cratering. The well blew out about ten different times and necessitated the cementing of the hole through the drill pipe on several different occasions. The pressure involved was not over 250 pounds but the volume of flow was so great that the job was extremely difficult. At one blowout the well blew the fourble board from the derrick and injured the driller when one of the four-inch timbers struck him in the back. Added difficulties were caused by the absence of mud and colloidals. This well was finally drilled to 700 feet, however, where it was made a producer in that horizon.

Another hole was drilled 200 meters directly south of the above mentioned well and came in for 1400 barrels per day at 596 feet. Again, with the equipment at hand, it was impossible to get in tubing or liner and the well is still producing from the casing.

To test the northern edge of the structure Well No. 11 was drilled and after three blowouts in the 500-, 700- and 900-foot sands was carried into the 1400-foot sand and there made a producer. The pressures and gas volume in that sand were the highest so far encountered, with the casing pressure averaging 850 pounds and the gas about 25 million cubic feet. Owing to this large volume of gas and the absence of separators to handle it, the production of oil was small.

Well No. 12 which was drilled 800 meters due north of Well No. 1 came in unexpectedly at 1200 feet. This well, when shut in, started producing an estimated 6000 barrels per day from surrounding ground since there was no pipe except a 200-foot surface string yet in the hole. The well was cemented, and then drilled three feet deeper into the sand. An attempt to run liner was unsuccessful as it was blown from the hole. The well was therefore put to producing from the casing and made about 800 barrels per day through a three eighths-inch choke.

Three Rigs Running

The present drilling program calls for running three rigs with two drilling crews. Cement time on one well is used in drilling on one of the other wells. With the exception of two wells all the holes were drilled with light portable rigs and 67 and 84 foot derricks. Steam was used exclusively with one boiler and a single barrel engine powering the rig. Circulation was provided with one 10x4½x10 pump.

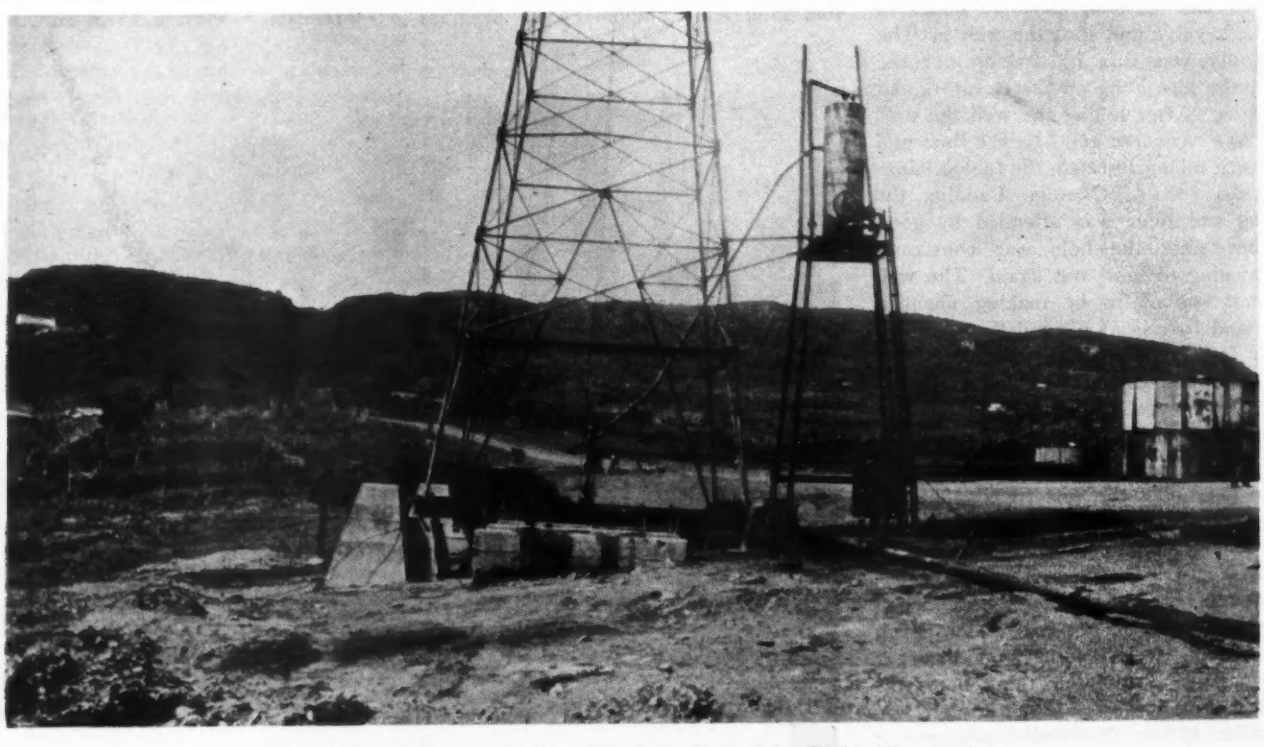
The water supply for the field is limited to what water can be bought from the natives who own the water rights on springs used for irrigation purposes. At the present time and at an exorbitant cost there is only available for the operation about 1200 barrels of water daily. The frequent blowouts are very costly as the entire field lies in a very fertile and totally cultivated portion of the land.

The field at this time is limited to 8000 barrels per day due to the lack of sufficient field gathering tanks. The potential is greatly in excess of this.

This structure is very small in comparison to a nearby structure under control of the Standard Oil Company where a test is now being drilled. This structure is estimated as being 10 kilometers long and 30 wide and is situated about 20 kilometers east and west of the field here described. It is expected to be even more highly prolific as its production will be from the same formations.

Storage tankage consisting of an 80,000 and a 20,000 barrel tank situated on the beach has been constructed and a sea line for loading tankers installed. The sea line made of 11¼-inch casing was laid for approximaely 3800 feet. on the ocean floor and terminates in a riser arranged on a rack. The ships are moored to buoys and are loaded by means of two 1250 r.p.m. centrifugal pumps powered by an oil engine.

Owing to the natural slope of the country, all oil from the wells to the gathering tanks and these to the beach storage is handled by gravity. The gathering system consists of a combi-



Looking south at the discovery well, Cumarebo Field, Venezuela

nation six-inch and nine-inch victaulic coupled line and a three-inch screwed line running directly through the center of the field. These lines follow a valley and all wells on either side of them are connected into two separators at the gathering station situated at the north end of the field.

By use of crossover connections between the six-inch line and the three-inch line the various wells are directly connected. The separators are of two sizes with the large one taking the total production from the field and the small one being used for testing an individual well to determine its daily production to estimate the gas-oil ratio. In order to construct the gravity gathering line it was necessary to tunnel for 130 meters through the only transverse hog back in the field. The oil is gravitated from the gathering tanks to the storage tanks on the beach by means of a six-inch victaulic coupled line of approximately six kilometers in length.

Refinery Survey *Shows Continued Increase in* Cracking Capacity

PRODUCTION of gasoline by cracking in the refining industry has shown steady increase in recent years; in 1931 the output of cracked gasoline totaled 176,181,000 barrels, an increase of seven per cent over 1930. As the output of all grades of gasoline at refineries showed a small decrease in 1931, it follows that the proportion of cracked gasoline to the total, increased materially.

Data as to the gasoline yields obtained by cracking vary widely, depending upon the type of process, charging stock and manner of operation. In 1925 the average gasoline yield reported by all companies was 33 per cent of the charging stock. In 1931 an analysis of reports of about 25 large companies show a yield of 45 per cent, indicating material improvement in efficiency.

According to U. S. Bureau of Mines, Information Circular, 6648, "Survey of Cracking Plants, January 1, 1932" by G. R. Hopkins, Economic Analyst, the daily charging capacity of the cracking plants in the United States, January 1, 1932, amounted to the record total of 2,046,981 barrels. This represents an increase over the previous year of 96,200 barrels, or five per cent. Although the increase in total charging capacity of the cracking plants during 1931 was considerable less than 1930, it was about three times the increase in the capacity for straight distillation.

Charging Capacity

Total charging capacity of operating plants was 1,603,809 barrels, or 78 per cent of the total. Capacity of inoperative plants was 394,585 barrels, or 19 per cent. Capacity of plants under construction was 48,587 barrels, or three per cent.

Texas continued to rank far ahead of the other states in total capacity of cracking plants; California was second, Indiana third. Total capacity of cracking plant in Texas, largely concentrated on the Gulf Coast, amounted to 645,720 barrels, or 32 per cent of the total for the United States.

The number of cracking units as of January 1, 1932, total 1,348, compared with 1,868 a year ago. This material decline resulted chiefly from continued dismantling of a large number of Burton stills of small average capacity. Number of units has shown a steady decline in recent years; total capacity a steady increase. This trend is indicative of the tendency to replace small, obsolete units by one or two large modern units. For example, the average size of the cracking units on June 1, 1925, the date of the first cracking survey, was 330 barrels; on January 1, 1932, average capacity was approximately 1500 barrels.

Modernization of Plants

In cracking, as in practically all industrial operations, capacity may be increased either by construction of new units or by remodeling existing equipment. Until five years ago most of the capacity that was added consisted of new equipment, but the last few years have witnessed a tendency to increase potential throughput by modernizing existing units. It is estimated that at least 125,000 barrels of daily cracking capacity has been added through remodeling in 1931, compared with about 150,000 barrels added through construction of new equipment. On the other hand, the cracking capacity is also reduced two ways, by the dismantling of old units and through obsolescence. It is estimated that about 110,000 barrels of capacity was dismantled in 1931 and that about 70,000 barrels was lost through obsolescence.

Tabulation of Cracking Units by States, Showing Number of Units, and Capacity, January 1, 1932

From U. S. Bureau of Mines, Information Circular 6648

STATE	Total Units	Charging Capacity, Barrels per Day			
		Operating	Shut Down	Building	Total
Alabama	1	.....	.....	3,000	3,000
Arkansas	21	10,500	6,250	.....	16,750
California	78	184,950	19,200	.....	204,150
Colorado	12	3,459	411	.....	3,870
Georgia	2	3,600	.....	.....	3,600
Illinois	112	75,700	21,900	.....	97,600
Indiana	129	132,050	40,500	12,000	184,550
Iowa	1	.....	1,000	.....	1,000
Kansas	91	79,500	30,050	12,500	122,050
Kentucky	8	10,000	.....	.....	10,000
Louisiana	51	87,300	6,000	.....	93,300
Maryland	22	24,200	15,200	.....	39,400
Massachusetts	16	22,300	8,000	.....	30,300
Michigan	3	3,750	.....	.....	3,750
Missouri	26	15,500	4,500	.....	20,000
Montana	4	2,800	2,000	.....	4,800
New Jersey	48	93,300	15,200	7,040	115,540
New York	14	19,600	.....	.....	19,600
Ohio	28	62,100	.....	.....	62,100
Oklahoma	146	104,200	13,250	2,500	119,950
Pennsylvania	94	116,250	32,700	.....	148,950
Rhode Island	3	6,000	.....	.....	6,000
South Carolina	8	.....	14,400	.....	14,400
Texas	247	609,270	132,450	4,000	645,720
Utah	33	6,400	3,800	1,000	11,200
West Virginia	10	7,450	4,000	.....	11,450
Wyoming	140	23,630	23,774	6,547	53,951
U. S. TOTAL	1,348	1,603,809	394,585	48,587	2,046,981

The Interdependence *of the States in* Oil Conservation

NORTHCUTT ELY

MORE than 20 states have found it necessary to legislate on the production of oil and gas. Seven of the leading producing states have extended their legislation to the point of controlling, by some method or other and with various degrees of effectiveness, the rate of production of these resources. This body of statutory law, governing production, distinguishes the oil industry from every other natural-resource industry.

The body of existing statutes, while apparently constituting a growing interference with the production of oil, in fact represents a growing effort to eliminate certain artificial factors which themselves interfere with the laws of supply and demand. One of those factors, as Mr. Oliver and Mr. German have repeatedly demonstrated, is the lack of relationship between an oil pool as a physical unit and the artificial property lines which cross it. We are familiar with the prevailing doctrine of capture, its unfortunate history, and its effect in driving oil to market under the impetus of offset drilling without regard to the demand. A parallel factor is the lack of relationship between a producing region, as an economic unit, and the state lines which divide it. This paper is concerned with the efforts of the individual states in solving that first factor, and with the possible knitting together of these efforts for the solution of the second.

We have seen the effect of proration in a single field, and proration among the fields of a state; our present inquiry is whether such a thing as proration among the states can be accomplished.

There is an unavoidable interaction among the producing oil fields of a region, and this interaction is entirely independent of the state lines which arbitrarily divide the area. Oklahoma, Kansas, and Texas may all be tributary to the same agricultural market, but their competition is free from the second element which sets the oil industry apart from all other natural resource industries. That feature is the disproportion between the initial and the ultimate rates of production of an oil pool, and between the initial and the ultimate cost of production per barrel. Investments in Oklahoma and Kansas, in settled fields, may be protected by limitations placed by those states on the wasteful flush production of neighboring fields, but an outbreak of a new flush field in Texas, pouring oil into a previously orderly market under the stimulus of competitive offset drilling and the cheap unit cost of a flush pool, may destroy those investments overnight. No state may relieve this pressure from outside its borders except by adherence of all of them to some common production plan.

NORTHCUTT ELY

Executive Assistant to the Secretary of the Interior; Chairman, Advisory Committee to the Federal Oil Conservation Board.

His accompanying address was an interesting part of the production rationalization discussion under the auspices of the Petroleum Division of the American Institute of Mining and Metallurgical Engineers, at Ponca City, Oklahoma, September 30, 1932.

Three Methods of Approach

The suggestions of a national plan for production and the prevention of waste have turned upon three methods of approach: first, the proposal for voluntary action by the industry on a national scale; second, the proposal for federal regulation; and third, the proposal for interstate cooperation.

It is not the purpose of this paper to discount either of the first two methods, but to point out the possibilities of the third.

It is enough to say as to the first proposal that the anti-trust laws will present a formidable obstacle, at least until their effect on nation-wide production agreements is tested by litigation. In 1928 and 1929 the American Petroleum Institute accomplished the task of bringing approximately 90 per cent of the country's production, and a large part of the world's production, into a tentative plan for curtailment to the 1928 level and division of production among areas of the world in the 1928 ratio. That plan, brought before the Federal Oil Conservation Board in the spring of 1929, encountered a report from the attorney general pointing out the practical certainty of litigation under the anti-trust laws. If the applicability of the anti-trust laws to private agreements limited solely to the production of natural resources remains an open question, it is one which the industry has not shown an inclination to press to a judicial conclusion.

The second proposal, calling for federal control of production of oil and gas, advanced by Mr. Henry L. Doherty, the pioneer in the unit operation movement, has attracted much emotional controversy. Few lawyers have ever seen the plan reduced to the form of a proposed statute, or have been in position to argue out the merits of a specific program. Recently an able article in the Michigan Law Review has come to the support of the plan to use federal authority, advancing in its support the treaty power, the commerce power, the taxing power, and a number of other bases. Whatever may be the merits or demerits of the proposal, it is enough to say here that the time required to effect such a plan, scrapping the machinery built up by the states, may be compared with the period of 17 years which has been required to bring the system of state control to its present degree of effectiveness. The industry has shown no inclination to expedite federal control at any greater pace under peace-time conditions.

This brings us to the third suggestion—that of interstate cooperation. Its great advantage lies in the use and adaptation of existing and proven conservation agencies.

As long ago as 1922, Judge Brandeis, in a dissenting opinion in the Pennsylvania-Ohio-West Virginia natural gas controversy, pointed out the difficulty confronting the courts in endeavoring to fix a fair allocation of natural gas production and distribution for an interstate consuming region, and suggested that if such an apportionment is to be effected scientifically, some form of interstate public service commission will be required; and that even such a commission will face a formidable task.

In 1926 the Federal Oil Conservation Board, in its first report, pointed out that if any state was to be entirely successful in its conservation efforts it must have the cooperation of other producing states, and suggested an interstate agreement for such purposes.

In 1929, when the American Petroleum Institute's voluntary-agreement plan came before the board and encountered there

(*Continued on page* 40)

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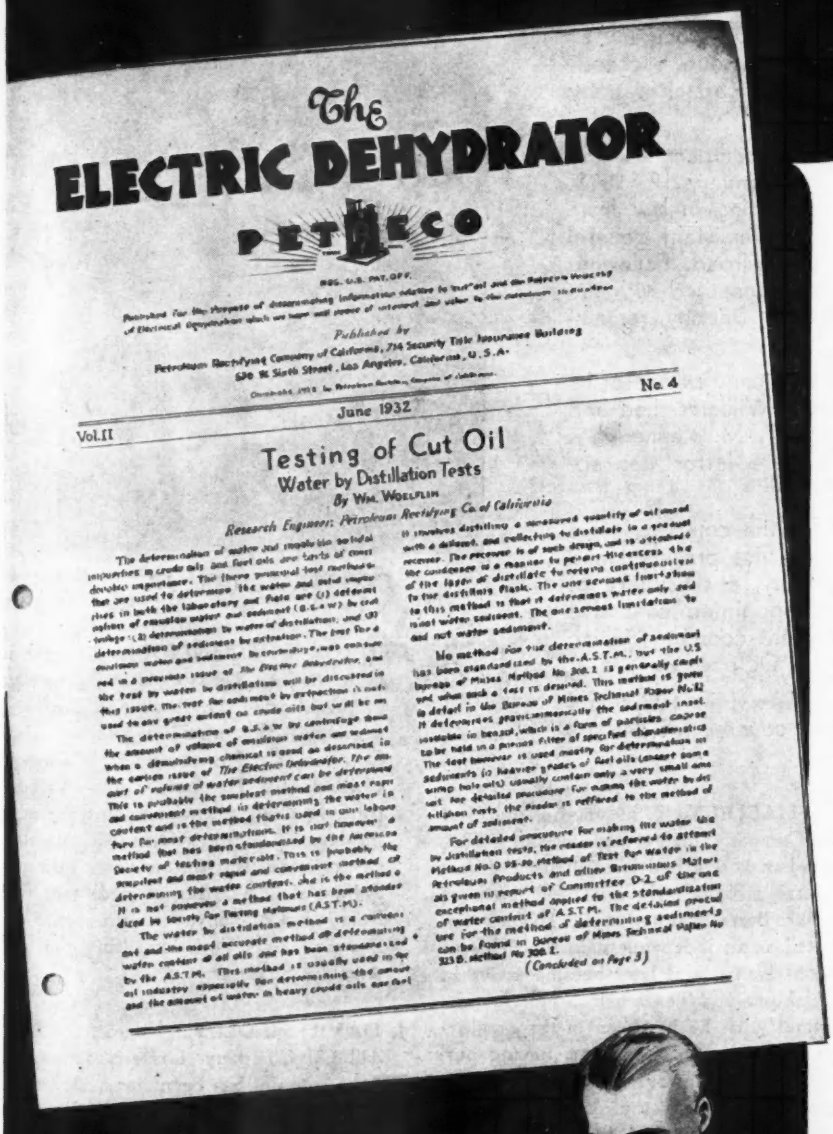

The Electric Dehydrator

ELECTRIC DEHYDRATOR

PETRECO

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Vol. II — June 1932 — No. 4

Testing of Cut Oil
Water by Distillation Tests
By Wm. Woelflin

Research Engineer, Petroleum Rectifying Co. of California

The determination of water and insoluble solid impurities in crude oils and fuel oils are tests of great importance. Two diverse practical test methods that are used to determine the water and solid impurities in both the laboratory and field are (1) determination of emulsion water and sediment (B.S.&W.) by centrifuge; (2) determination by water of distillation, and (3) determination of sediment by extraction. The first and second methods were discussed in considerable detail in the previous issue of The Electric Dehydrator, and the test by water of distillation will be discussed in this issue. The test for sediment by extraction is rarely used to any great extent on crude oils but will be mentioned briefly later.

The determination of B.S.&W. by centrifuge tests, the amount of volume of emulsion water and sediment when a demulsifying chemical is used as described in the earlier issue of The Electric Dehydrator. The amount of volume of water and sediment can be determined. This is probably the simplest method and most rapid and convenient method in determining the water in crude oil and is the method that is used in our laboratory for most determinations. It is not however a method that has been standardized by the American Society of Testing Materials. This is probably the simplest and most rapid and convenient method of determining the water content. She is the method adopted by Society for Testing Materials (A.S.T.M.).

The water by distillation method is a correct one and the most accurate method of determining water content of all oils and has been standardized by the A.S.T.M. This method is usually used in the oil industry especially for determining the amount and the amount of water in heavy crude oils and fuel oils. It involves distilling a measured quantity of oil mixed with a solvent, and collecting the distillate in a graduated receiver. The receiver is of such design, and is attached to the condenser in a manner to permit the excess of the upper of distillate to return continuously to the distilling flask. The use assumes limitations to the distillate is that it determines water only and not water sediment.

The method for the determination of sediment by extraction has been standardized by the A.S.T.M., but the U.S. Bureau of Mines Method No. 308.2 is generally employed when such a test is desired. This method is given in detail in the Bureau of Mines Technical Paper No. 82. It determines gravimetrically the sediment insoluble in benzol, which is a form of particles coarse enough to be held on a porous filter of specified characteristics. The test however is used mostly for determination of sediments in heavier grades of fuel oils (except some bunker fuel oils) usually contain only a very small amount of water. For details of the water by distillation tests the reader is referred to the method of A.S.T.M.

For detailed procedure for making the water by distillation tests, the reader is referred to Method No. D 95-30 Method of Test for water in Petroleum Products and other Bituminous Materials as given in report of Committee D-2 of the American Society for Testing Materials. Method of water content of A.S.T.M. The detailed procedure for the method of determining sediments can be found in Bureau of Mines Technical Paper No. 82 B. Method No. 308.2.

(Concluded on Page 3)

The Electric Dehydrator is the name of a publication issued at regular intervals by this company for the purpose of disseminating information relative to crude oil emulsions and their treatment by the Petreco Process of Electrical Dehydration.

It is the only publication that deals exclusively with "cut" oil, and articles by recognized authorities which appear in each issue contain the most authentic information relative to the latest developments on the dehydration of crude oil emulsions.

Oil company executives may insure receipt of The Electric Dehydrator regularly without cost or obligation by requesting that their name be placed on our mailing list. Just write your name, the name of your company and address across the margin of this page, tear off and mail to us.

PETROLEUM RECTIFYING CO.
OF CALIFORNIA
530 W. SIXTH ST. LOS ANGELES, CALIF.

Branch: 412 Petroleum Building, Houston, Texas

MEN IN THE INDUSTRY'S NEWS

GEORGE A. HILL, JR.

Barrister, and Oil Company Executive

Who was elected president of the Houston Oil Company at a recent meeting of directors in St. Louis, Missouri, succeeding E. H. Buckner, resigned, who has been incapacitated by illness for several months.

Mr. Hill, who has been active head of the company for the past five months, was born in Corsicana, January 12, 1892. He received his education in Texas, graduating in law from the State University in 1911, and becoming assistant general attorney the same year for the I. & G. N. Railroad. Following departure from the university, he became connected with the law firm of William H. Wilson and Samuel B. Dabney, remaining with this firm six years.

In 1917 Mr. Hill went with Houston Oil Company as one of its general attorneys in the firm of Kennerly, Williams, Lee and Hill. Later he succeeded Federal Judge T. M. Kennerly as general counsel for the company when the latter was appointed to the bench.

Eight years of service as an attorney for the company were rewarded in 1925 when Mr. Hill was made vice president and a director of Houston Pipe Line Company, a subsidiary of Houston Oil Company. Later he was appointed executive vice president and a director of the parent company, which offices he held at the time of his election October 8.

George D. Sears, of the firm Williams, Lee, Hill, Sears and Kennerly, succeeds Mr. Hill as general counsel for the oil company.

GEORGE A. HILL, JR.

PAT MALLOY, independent operator of Tulsa, has been named chairman of the publicity committee of the Independent Petroleum Association of America. Other members of the committee are: Glenn Condon, Skelly Oil Company; Earl Sneed, Sneed Royalty Company; Paul S. Hedrick, Tulsa World; Omer K. Benedict, First National Bank; Newton R. Graham, Exchange National Bank; Robert Lambert, Tulsa Tribune; Rolla Clymer, El Dorado, Kansas Times; Carl McGee, Oklahoma News; and Carl Estes, Tyler (Texas) Morning Telegraph.

M. NIGORO and M. Kitano, engineers with the Nippon Oil Company, Ltd., Tokyo, Japan, were visitors in Houston last week as part of a tour of observation of production development and maintenance methods throughout the United States. They left October 12 for Mid-Continent fields.

FRED K. FOSTER, formerly district geologist for Sinclair Prairie Oil Company in Wichita Falls and later in San Angelo, has moved to San Antonio, where he will engage in consulting work and also direct the geological activities of Richey and Casey, independent operators of San Antonio.

H. H. HALLECK, 55, an employee of Sun Oil Company, died at his home in Dallas, October 6. He had been ill for the past several months. Having been born at Wilkes-Barre, Pennsylvania, Halleck operated as an independent in the fields of Pennsylvania, and later became active in Oklahoma and Texas fields. For the past several years he has been in the employment of Sun Oil Company, having purchased right-of-way for the company's gasoline line in the East, and when stricken was engaged in appraising the Oklahoma properties of Twin Oil Company. Department heads of Sun Oil Company served as pallbearers at the funeral held October 10, with burial in the Calvary Hill Cemetery, Dallas. Besides a widow, Halleck is survived by three sons and two daughters.

MR. AND MRS. W. L. UMBURN, oil operators of Weleetka, are now operating out of San Antonio. Mrs. Umburn, who is known as Oklahoma's first woman driller, was a recent visitor in Weleetka.

D. O. BARRETT, engineer for Gypsy Oil Company, spoke to the Burbank Chapter, American Petroleum Institute, at its meeting of Wednesday, October 12. Mr. Barrett's subject was, "Rig Fronts and New Type Power Transmission Unit."

GEORGE W. SCHNEIDER, district geologist for The Texas Company, was elected president of the Shreveport Geological Society, at the annual election of officers October 7. He succeeds William F. Chisholm of Halliburton Oil Well Cementing Company who was president for the last 12 months. Other officers elected to serve for the ensuing year are: Sidney E. Mix, district geologist, Gulf Refining Company, vice-president; and Durward N. Jolley, consulting geologist, secretary-treasurer.

J. DAVID HEDLEY, geologist for Barnsdall Oil Company, formerly stationed at San Antonio, has been transferred to the Gulf Coast territory, and now maintains headquarters in the Esperson Building, Houston.

C. D. WATSON, chief engineer for Carter Oil Company, has recently been made a director of the company. In the various changes which have recently been made in that organization, Rex Dawson, former chief scout, has been made assistant to Vice President Lang and Vance E. Rowe has been elevated to the position of chief scout.

RICHARD T. HERNDON, vice president of The Texas Company of California, was recently married to Miss Mary Darling of Chelsea, Vermont. They are honeymooning in the Pacific Northwest and will return to Los Angeles later in the month.

(Continued on page 43)

MARKETS ~ STATISTICS

Standard of Indiana Opposes General Price Raise and Gives Reasons in Statement; Carter Withholds Statement. Gasoline Buyers Rush Market on News of Pending Crude Price Increase. Refinery Stocks Slightly Down.

Production Drop of Slight Import With Cuts Pending

WHILE it was down 7000 barrels from the level of the previous week, to a new figure of 2,160,205 barrels, average daily crude oil production of the United States for the week ending October 15 was naturally a subject for only slight consideration. For whatever the output during the period, it was doomed to undergo a precipitous drop beginning at seven o'clock on the morning of October 15, the date set for effectiveness of the Texas Railroad Commission's sweeping curtailment of allowable production in the state—a cut of over 100,000 barrels, which has precipitated a general upward revision of crude oil prices in Texas, Oklahoma, Arkansas and Louisiana.

By the time the reduced Texas allowables went into effect practically all important purchasers had posted higher crude oil prices,* following the action taken by Sun Oil Company late Monday, October 10, on the same day that the railroad commission announced its intention of sharply reducing production throughout the state.

Fields in all sections of Texas are affected by the reduction, including the flush East Texas field, which was cut 40,000 barrels to a new allowable of 335,000 barrels daily. For accomplishing the decrease in that field, it was ordered that each well there be allowed only 40 barrels production per day for the 15 days beginning October 15, as compared with a previous quota of 44 barrels daily.

Coming simultaneously with a cut of about 15,000 barrels in official daily allowable production in Oklahoma, and just after announcement of a large reduction of the allowable in California, the Texas Railroad Commission's action was generally regarded as helping greatly in putting the oil industry upon a very sound basis, with production under the new plans expected to conform rather closely with market requirements.

The great significance which was attached to the drastic reduction in Texas production is readily understood through reference to the accompanying estimates of daily crude oil output. For the week ending October 15, just prior to effectiveness of the reduced allowable, the state was producing only a little less than one-half the nation's entire output, its average being 923,125 barrels daily.

The latter figure included an average daily yield of 392,800 barrels for the East Texas field, which was considerably above the previous week's average, due to the way in which proration operates there, rising always toward the beginning and the middle of each month, at which periods the allowable per well is cut back. That field was the only area in the state showing any important fluctuation in production rate.

The nation's total was prevented from soaring upward under the influence of East Texas largely through a drop of 23,000 barrels at Oklahoma City, to 57,370 barrels daily, that decline being reflected bodily in comparative figures for the state as a whole.

Kansas showed practically no change in rate of production, and neither did California, Louisiana, or Arkansas.

THE OIL WEEKLY

Estimated Average Daily Production in Barrels

District—	For Week Ending	
TEXAS—	**Oct. 15**	**Oct. 8**
Texas Panhandle	42,075	45,100
North and West Central Texas	72,500	72,800
West Texas	171,050	170,550
East Central Texas	52,000	51,900
East Texas Field	392,800	370,000
South Texas	54,650	59,500
Total Texas outside Gulf Coast	785,075	769,850
Texas Gulf Coast	138,050	139,100
Total Texas	923,125	908,950
OKLAHOMA—		
Oklahoma City	57,370	80,500
Seminole District	130,495	130,200
Other Oklahoma	184,280	186,285
Total Oklahoma	372,145	396,985
KANSAS—		
Ritz-Decker	16,470	17,250
Voshell	9,130	6,750
Other Kansas	75,960	76,425
Total Kansas	101,560	100,425
LOUISIANA—		
North Louisiana	29,425	28,750
Louisiana Gulf Coast	31,600	33,600
Total Louisiana	61,025	62,350
Arkansas	33,700	33,825
CALIFORNIA—		
Long Beach	67,000	65,000
Santa Fe Springs	58,000	57,000
Midway-Sunset	49,800	48,000
Kettleman Hills	60,000	58,000
Other California	235,400	242,000
Total California	470,200	470,000
MOUNTAIN STATES—		
Wyoming	32,600	30,900
Montana	7,200	7,600
Colorado	2,800	2,950
New Mexico	32,150	31,450
Total Rocky Mountain States	74,750	72,900
Eastern States	99,900	98,250
Michigan	23,800	23,650
Total United States	2,160,205	2,167,335

Refined Market Stronger On Eve of Crude Advance

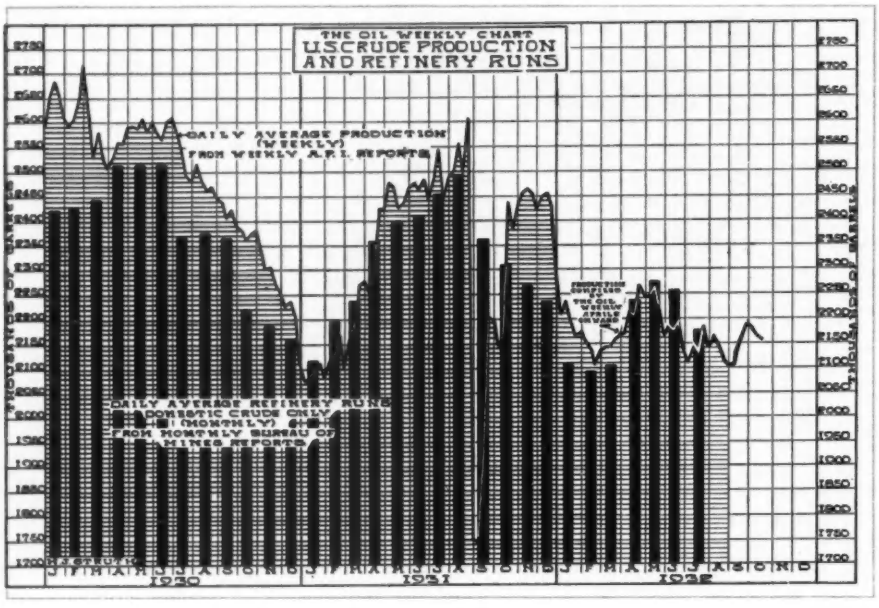
INCREASES in the price of Mid-Continent crude brought a general rush of buying with the refined products market materially strengthened. Early in the week jobbers were trying to force the low octane motor market below 3⅞ cents but immediately following announcement of advances in the crude market the price jumped to 3⅝ cents for resale and most of the major units were asking 3¾ to four cents to the trade. Middle and high octane motor fuels advanced an average of about ¼ cent and were holding steady. Burning oils, which slumped slightly late last month, were given a boost to 3⅞ cents with no material reported below 3⅛ cents even for resale. Natural gasolines were slower to move, having advanced only about an eighth of a cent to make the prevailing price 2⅝ cents.

Although the new Oklahoma proration order had not been received, it is understood that state allowable will be 381,790 barrels, a cut of 15,925 barrels below the figure for September. Preliminary reports indicated a cut of 17,925 barrels due to an anticipated reduction of 2000 barrels in the demand for Tatums crude. This pool has been allowed 5400 barrels daily for several months and it was at first thought that the allowable would have to be reduced to 3400 barrels, but purchasers were able to take care of the remaining 2000 barrels.

Assuming that the new schedules will be met by all purchasers, Oklahoma operators will gain approximately $30,850 in their daily income and yet conserve more than 15,000 barrels of oil daily which may later sell at a price better than that now posted. The practice of increasing prices commensurate with reduction in allowable production seems economically sound and most certainly it puts the producer in a much better frame of mind after sustaining numerous cuts with promises that they would help stabilize the industry.

Estimated daily net crude movement in

*See page 8.



Oklahoma and Kansas for the week ending October 4 was 11,800 barrels cut as compared to a daily withdrawal of 30,000 barrels for the preceding week. Although the new price schedules should tend to reduce the amount of net withdrawal in the two states it is not believed that the figure will go much below an average of 10,000 barrels daily for the next few months.

Half of Oklahoma-Kansas Buyers Adopt Higher Price

Tulsa, Oklahoma, October 14.—Purchasers representing slightly more than 50 per cent of the daily crude requirements in Kansas and Oklahoma had met the new price schedules and other of the smaller purchasers had indicated a willingness to follow suit Friday evening. Those meeting the increased schedule were Magnolia, Shell, Gypsy, Continental, Pure, Empire, Barnsdall, Phillips Petroleum, Sinclair Prairie, White Eagle and Kanotex Refining Companies, the latter two posting for Kansas only.

Stanolind Crude Oil Purchasing Company, Standard of Indiana subsidiary, officially announced that it would not meet the price, stating, "conditions do not warrant even the present prices and will not give necessary support to an increase." Stanolind purchases approximately 85,000 barrels daily in Kansas and Oklahoma.

Carter Oil Company, purchaser of approximately 60,000 barrels daily through its subsidiary, the Oklahoma Pipe Line Company, had made no statement regarding its position.

Due to fact that Carter and Stanolind represent approximately 40 per cent of the daily purchases, considerable interest has awaited the stating of their positions.

As a result of the various announcements increasing the price of crude during the first five days of the week, the gasoline market showed material improvement, advancing approximately one-half cent per gallon at the refinery.

"Jobbers over the country have been hearing a lot to the effect that the crude market was weak and consequently have been holding off on buying as much as possible," said an executive of one oil company at Tulsa Friday afternoon. "At the first evidence of the crude market stiffening they began buying."

Additional postings of the new price schedule were expected following a meeting to be held at Wichita, Kansas, on October 15, at which time oil leaders of Kansas and Oklahoma were to discuss further curtailment of production.

Announcement of the meeting was made by Marvin Lee, chairman of the advisory committee of the Public Service Commission, who said that it was being called at the instance of Thurman Hill, member of the commission. Hill has recently called upon Kansas producers to cut production to 88,000 barrels daily, a reduction of slightly more than 12,000 barrels.

Standard of Indiana Gives Reason for Opposing Raise

Tulsa, Oklahoma, October 14.—Officials of Standard Oil Company of Indiana announced today that their company cannot advance its posted prices for crude oil despite the recent action of certain other companies.

"Conditions do not warrant even the present prices and will not give necessary support to an increase," they said in an explanatory statement.

"Everybody in the industry knows that with consumption of gasoline falling off enormously price cutting is rampant throughout the oil business. Although producers are making commendable efforts to control their problems, crude is still being produced in excess of demand.

"Some of it is being run illegally and sold at prices that jeopardize the posted price structure.

Price Cutting

"Refineries are manufacturing more gasoline than is needed. Many are dumping at cut prices. Aided by rising taxes, tax evaders are wrecking retail markets wherever they operate. There is also much retail price cutting by reputable marketers who are striving to hold volume of sales regardless of profits.

"The Indiana company is sincerely desirous of seeing producers receive a satisfactory price for crude, but it is convinced that an advance in the face of present conditions the new posting will simply provide leeway for further abuses and delay progress toward permanent recovery in the oil industry. It believes that the sound road toward better prices for both crude and finished products is by way of first correcting the fundamental conditions which will control eventually, no matter how they are temporarily overlooked in eagerness for better returns."

California Fields Fall Below Potential Estimates

FAILURE of the Playa del Rey field to make its rated potential during the present open flow test indicates that other fields may fall considerably short of their potentials. While Playa del Rey is not an economic factor, its action holds a peculiar significance.

It has been freely predicted that the true potentials for various fields will be found to be somewhere between actual daily output of the past 60 days and the rated potentials. This means that Long Beach should produce around 82,000 barrels during an open flow test, and Santa Fe Springs should produce about 72,000 barrels. These two fields may do better than expected, however, as many small wells have been shut in for some time. The Huntington Beach potential has been placed at 37,500 barrels, but the field will have a hard time to make so much oil.

Kettleman Hills is given a potential of

Crude Runs to Stills, Motor Fuel Stocks, Gas, and Fuel Oil Stocks and Cracked Gasoline Production, Week Ended October 8, 1932

(Figures in barrels of 42 gallons each)

DISTRICT	Daily Refining Capacity of Plants			Crude Runs to Stills		MOTOR FUEL STOCKS					Gas and Fuel Oil Stocks	Daily Charging Capacity of Cracking Units			Cracked Production Daily Average
	Potential Rate	Reporting Total	Reporting %	Daily Average	% Operated	(a) At Refineries	(b) Bulk Terminals	(b) In Transit	(c) Other M.F. Stocks	Total Motor Fuel		Potential Rate	Reporting Total	Reporting %	
East Coast	644,700	638,700	99.1	411,000	64.3	4,301,000	7,833,000	1,504,000	330,000	13,968,000	9,181,000	344,400	326,400	94.8	75,000
Appalachian	144,700	137,500	95.0	81,000	58.9	989,000	411,000	10,000	230,000	1,640,000	873,000	59,100	57,600	97.5	24,000
Ind., Ill., Ky	434,900	424,000	97.5	266,000	62.7	3,423,000	2,744,000	70,000	170,000	6,407,000	4,119,000	341,400	328,200	96.1	78,000
Okla., Kans., Mo	459,300	405,800	88.4	207,000	51.0	2,973,000	766,000	.....	850,000	4,589,000	3,169,000	257,400	238,100	92.5	48,000
Inland Texas	315,300	227,200	72.1	95,000	41.8	1,078,000	75,000	.....	240,000	1,393,000	2,081,000	117,300	95,100	81.1	20,000
Texas Gulf	555,000	545,000	98.2	387,000	71.0	4,418,000	53,000	.....	240,000	4,711,000	10,501,000	506,500	495,500	97.8	87,000
Louisiana Gulf	146,000	142,000	97.3	64,000	45.1	1,295,000	158,000	.....	30,000	1,483,000	4,113,000	74,400	74,400	100.0	15,000
North La.,—Ark	89,300	84,500	94.6	41,000	48.5	102,000	26,000	.....	60,000	188,000	551,000	29,500	25,500	86.4	7,000
Rocky Mountain	152,000	139,000	91.4	27,000	19.4	1,233,000	.....	.....	20,000	1,253,000	481,000	71,400	68,100	95.4	5,000
California	915,100	866,100	94.6	426,000	49.2	12,098,000	.....	.....	2,880,000	14,978,000	100,673,000	197,700	197,700	100.0	37,000
TOTALS WEEK: October 8, 1932	3,856,300	3,609,800	93.6	2,005,000	55.5	31,910,000	12,066,000	1,584,000	5,050,000	50,610,000	135,742,000	1,999,100	1,906,600	95.4	396,000
October 1, 1932	3,856,300	3,609,800	93.6	2,054,000	56.9	32,407,000	12,425,000	1,263,000	5,050,000	51,145,000	135,672,000	1,999,100	1,906,600	95.4	415,000
Below are set out estimates of Crude Runs to Stills and Motor Fuel Stocks on B. of M. Basis for week Oct. 8, 1932 compared with certain Oct. 1931 Bureau figures.															
Estimate B. of M. basis Week October 8, 1932				2,080,000	(d)	32,500,000	14,150,000		5,050,000	51,700,000					416,000
U. S. B. of M. October 1931 Figures:—					10/1	32,294,000	13,831,000		3,997,000	50,122,000					
October 1931 Daily Average Crude Runs				2,454,000	10/31	33,084,000	13,865,000		3,490,000	50,439,000	October 1931 Daily Average Cracked Prod.				517,000

(a)Stocks at refineries, except in California district, which includes stocks of finished gasoline and engine distillate at refineries, at water terminals and at sales distributing stations and any amounts in transit thereto.
(b)By districts, East of California only. In California, bulk terminal and in transit stocks are included under "At Refineries" heading. See note (a).
(c)Estimated. Includes motor fuel in pipe lines and unblended natural gasoline at refineries and plants, also blended M. F. at plants.
(d)Estimated to permit comparison with A. P. I. Economics Report which is on Bureau of Mines basis.

Comparison of Permits Granted for New Wells

	For week ending Oct. 8	Total this month	Total this year	Total this date last year	1931 year total
Arkansas	0	0	16	28	34
California	5	5	294	297	342
Louisiana	13	13	311	257	309
Kansas	16	16	310	362	475
Oklahoma	16	16	725	660	842
Texas	177	177	5,198	4,997	6,981
Totals	227	227	6,854	6,601	8,963

Summarized Review of Field Results

State—	Completions	Oil Wells	Gas Wells	Failures	Initial Prod.
Arkansas	3	1	0	2	25
California	5	3	0	2	2,135
Illinois	1	0	0	1	0
Indiana	0	0	0	0	0
Kansas	20	11	2	7	5,278
Kentucky	18	9	5	4	299
Louisiana	16	2	2	12	1,490
Michigan	14	9	0	5	3,521
Mississippi	0	0	0	0	0
New Mexico	3	3	0	0	1,395
New York	0	0	0	0	0
Ohio	12	5	6	1	118
Oklahoma	29	16	5	8	3,651
Pennsylvania	1	0	1	0	0
Texas	172	122	5	45	788,553
West Virignia	7	2	2	3	11
Miscellaneous	1	0	0	1	0
Totals	302	183	28	91	806,676

265,000 barrels, but nobody knows how correct this estimate is. The field certainly could make much more oil than it has been producing, as a large number of big producers are shut in.

Spreading employment to as many people as possible has been accomplished by shortening the working week to five or four days. Reduction of the number of working days per week has been accompanied by employing of more men in the fields. Small companies are following the larger producers with this policy.

Some progress has been made in reduction of the state total toward the 440,000-barrel allowable, but the goal is still far away. Failure to observe the schedule after it has had a fair chance to function will result in lower crude prices for California. A lower price schedule will not be posted until after various fields have had full opportunity to reduce their output to the correct level.

The influence of Russian oil is being felt in California, although actual deliveries have not been made where California crude has been going. It is the thought that a part of the regular export trade may be lost that is most disturbing. Japan and other Eastern countries have been steady customers, and loss of even a portion of these exports would be felt. Exporters are hoping for a continuation of exports to countries that are supposedly affected by Russian agreements.

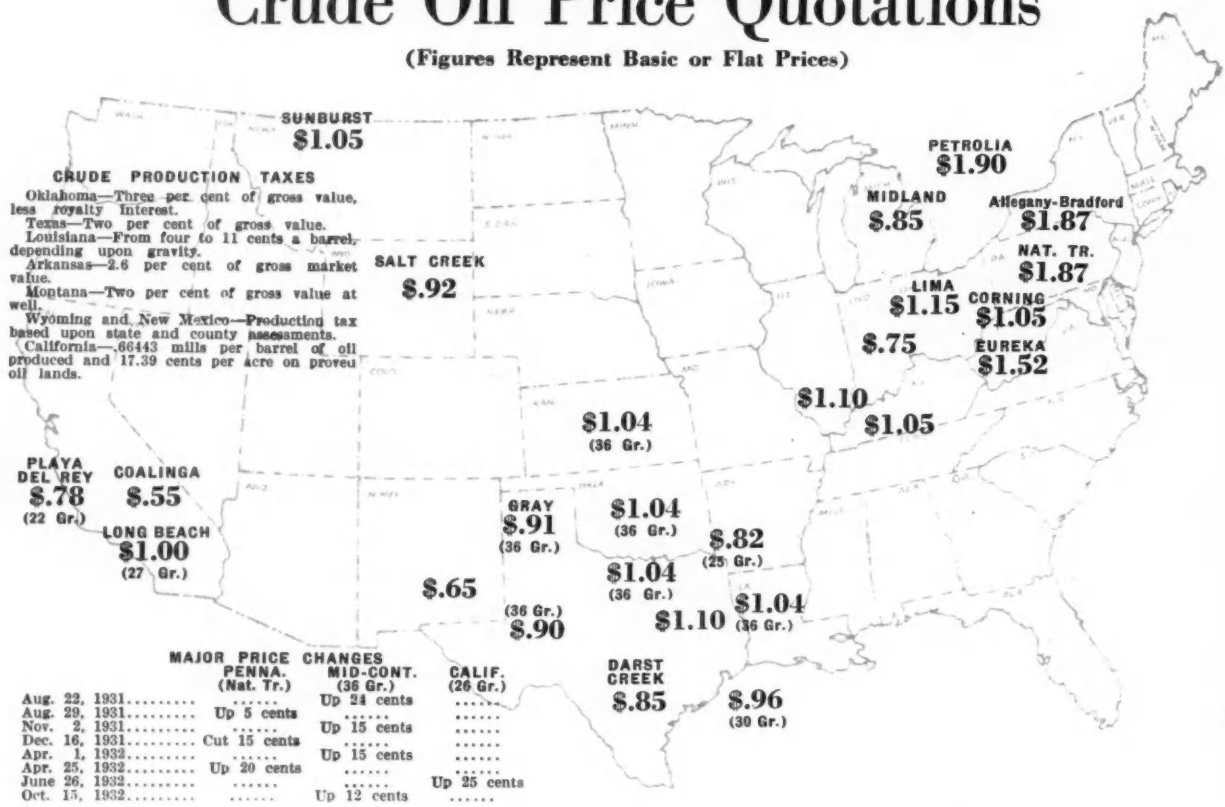
Decision Cancels Last of Naval Reserve Leases

Washington, D. C.—As a result of the refusal of the United States Supreme Court to grant a petition of the Pan American Petroleum Company, effect is given a decision of the Ninth Circuit Court of Appeals canceling three leases held by the company in Naval Petroleum Reserve No. 1, California, embracing approximately 1½ sections of land.

The suit for recovery of the lands was an outgrowth of the investigation of oil leases made by former Secretary of the Interior Fall, made some years ago by the Senate public lands committee, and the legislation resulting therefrom, under which the president was directed to institute proceedings to set aside certain leases and contracts held by the Pan American Petroleum & Transport Company.

Crude Oil Price Quotations

(Figures Represent Basic or Flat Prices)



MAJOR PRICE CHANGES

	PENNA. (Nat. Tr.)	MID-CONT. (36 Gr.)	CALIF. (26 Gr.)
Aug. 22, 1931	.....	Up 24 cents	.....
Aug. 29, 1931	Up 5 cents	.....	.....
Nov. 2, 1931	.....	Up 15 cents	.....
Dec. 16, 1931	Cut 15 cents	.....	.....
Apr. 1, 1932	.....	Up 15 cents	.....
Apr. 25, 1932	Up 20 cents	.....	.....
June 26, 1932	.....	.....	Up 25 cents
Oct. 15, 1932	.....	Up 12 cents	.....

Official Postings and Differentials *(Revised to October 15, 1932)*

CALIFORNIA: (Effective June 26, 1932).

Signal Hill, Seal Beach, Alamitos Heights, Huntington Beach, Olinda-Brea Canon, Torrance, and Richfield: 14 to 19.9 gravity 65 cents; 20-20.9 gravity 69 cents; 21 gravity 74 cents; 22 gravity 79 cents; 23 gravity 84 cents; 24 gravity 89 cents; 25-25.9 gravity 93 cents, top posting for Torrance and Richfield; 26-26.9 gravity 97 cents, top price for Seal Beach, Alamitos Heights and Huntington Beach: 27-27.9 gravity $1.00; 28-28.9 gravity $1.03, the top price for Olinda Brea Canon; 29-29.9 gravity $1.06; and 30-30.9 gravity $1.09, the Signal Hill top posting.

Inglewood: 14 to 19.9 gravity 65 cents; 20-20.9 gravity 71 cents; 21 gravity 77 cents; 22 gravity 82 cents; 23 gravity 87 cents; 24-24.9 gravity 92 cents, the top price.

Playa Del Rey: 14 to 19.9 gravity 65 cents; 20-20.9 gravity 69 cents; 21 gravity 74 cents; 22 gravity 78 cents; 23 gravity 82 cents; 24 gravity 86 cents; 25 gravity 91 cents; 26-26.9 gravity 96 cents, the top price. Field gathering charges of 5 cents a barrel.

Athens, Rosecrans and Dominguez: 24-24.9 gravity 89 cents; 25-25.9 gravity 93 cents; 26 gravity 97 cents; and 27-27.9 gravity $1.00 with three cents additional for each degree gravity upward, ending at 32-32.9 gravity $1.15.

Elwood Terrace: 33-33.9 gravity $1.04 and 6 cents more for each additional degree of gravity, ending with 37-37.9 gravity $1.28, all prices f.o.b. ship.

Whittier and LaHabra: 14 to 19.9 gravity 65 cents; 20-20.9 gravity 68 cents; 21 gravity 72 cents; 22 gravity 77 cents; 23 gravity 83 cents; and 24-24.9 gravity 89 cents, the top price.

Montebello: 14 to 20.9 gravity 65 cents; 21-21.9 gravity 67 cents; 22 gravity 70 cents; 23 gravity 73 cents; 24 gravity 76 cents; 25-25.9 gravity 80 cents, the top price.

Coyote Hills: 14 to 20.9 gravity 65 cents; 21-21.9 gravity 66 cents; 22 gravity 70 cents; 23 gravity 76 cents; 24 gravity 81 cents; 25 gravity 86 cents; 26 gravity 90 cents; 27 gravity 94 cents; 28 gravity 98 cents; 29 gravity $1.02; and 30-30.9 gravity, $1.05, the top price.

Santa Fe Springs: 24-24.9 gravity 73 cents; 25 gravity 79 cents; 26 gravity 84 cents; 27 gravity 89 cents; and 28-28.9 gravity 94 cents, with 4-cent differential for each degree of gravity upward to 35-35.9 gravity $1.22.

Newhall, McKittrick and Kern River: 14 to 19.9 gravity 55 cents.

Midway-Sunset, Elk Hills and Buena Vista: 14 to 19.9 gravity 55 cents; 20-20.9 gravity 59 cents; 21 gravity 63 cents; 22 gravity 69 cents; 23 gravity 75 cents; 24 gravity 81 cents; 25-25.9 gravity 87 cents and 5-cent differential for each additional degree gravity ending with 30-30.9 gravity $1.12.

Lost Hills: Same as Midway-Sunset up through 25-25.9 gravity 87 cents, then 26-26.9 gravity 91 cents; 27 gravity 94 cents; 28 gravity 99 cents; 29 gravity $1.02; and ending 30-30.9 gravity $1.05.

Coalinga: 14 to 19.9 gravity 55 cents; 20-20.9 gravity 59 cents; 21 gravity 62 cents; 22 gravity 65 cents; 23 gravity 68 cents; 24 gravity 72 cents; and ending 25-25.9 gravity 75 cents.

Wheeler Ridge: 14 to 19.9 gravity 55 cents; 20-20.9 gravity 57 cents; and 21-21.9 gravity 60 cents, with 3 cents more for each additional degree of gravity, ending 25-25.9 gravity 72 cents.

Oklahoma, Kansas, North Texas: (Effective October 15, 1932).

Below 28 gravity (Magnolia) 79 cents; below 29 gravity (others) 88 cents with differential of 2 cents for each degree to 40 gravity and above which is posted at $1.12.

North Texas: (Effective October 15, 1932).

Below 28 gravity (Magnolia) 79 cents; below 29 gravity (others) 88 cents, with two-cent differential upward, ending 40 gravity and above, $1.12.

Texas Panhandle: (Effective October 15, 1932).

Gray County: Below 35 gravity: 87 cents, with differential of 2 cents for each degree to 40 gravity and above, 99 cents.

Carson and Hutchinson Counties: Below 35 gravity: 75 cents with differential of 2 cents for each degree to 40 gravity and above which is posted at 87 cents.

West Texas: (Effective October 15, 1932).

Crane-Upton, Crockett, Ector, Howard-Glasscock, Pecos and Winkler Counties, Texas and Lea County, New Mexico: 90 cents.

Southwest Texas: (Effective October 15, 1932).

Refugio Heavy: 80 cents.

Refugio Light: (Same as Gulf Coast—see below).

Gulf Coast: (Effective October 15, 1932).

Goose Creek, Hull, Liberty, Orange, Pierce Junction, Mykawa, Moss Bluff, Raccoon Bend, Barbers Hill, Sour Lake, Spindletop, Sugarland, West Columbia, Humble and Refugio Light: Below 25 gravity: 90 cents, with differential of 1 cent for each degree to 36 gravity which is $1.02 then 2 cent differential to 40 and above which is $1.10.

Mirando: 90 cents; **Salt Flat:** 85 cents; **Darst Creek:** 85 cents; **Pettus:** $1.00; **Markham:** Same as Gulf Coast.

Conroe, Texas: (Effective July 18, 1932).

Two-cent differential applies, beginning 35-35.9 gravity, 90 cents, ending 40 gravity and above, $1.

East Texas: (Effective October 15, 1932).

Flat Price: $1.10.

North Louisiana and Arkansas: (Effective October 15, 1932).

Caddo, Homer, Haynesville, Bull Bayou, Sabine, Creton, De-Soto, El Dorado, Cotton Valley, Sarepta, Cartersville: Below 25 gravity 80 cents with differential of 2 cents for each degree beginning with 25 gravity and ending with 40 and above. Top price $1.12 a barrel.

Smackover: 75 cents.

Rocky Mountain States: (Effective June 1, 1932).

Salt Creek: Below 29 gravity 76 cents; 29-29.9 gravity 78 cents with differential of 2 cents each degree to 40 and above. Top price $1.00.

Elk Basin and Grass Creek: $1.10; **Big Muddy:** 98 cents; **Lance Creek:** $1.15; **Rock Creek:** 90 cents; **Sunburst:** $1.05; **Osage:** 98 cents; **Cat Creek:** $1.20; **Pondera:** 90 cents; **Hogback, New Mexico:** 80 cents.

Mid-Western States: (Effective April 11, 1932).

Lima: $1.15; **Indiana:** 75 cents; **Illinois:** $1.10; **Princeton:** $1.10; **Wooster:** $1.25; **Western Kentucky:** $1.05.

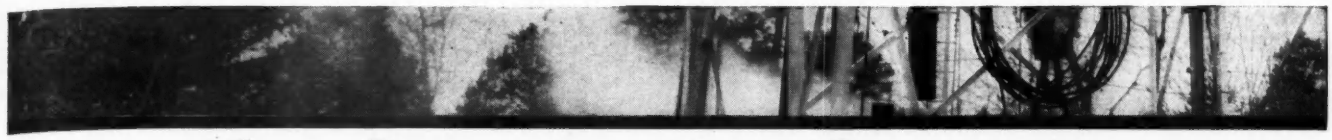
Pennsylvania: (Effective September 13, 1932).

Bradford District: $1.87; **National Transit Oil:** $1.87; **Southwest Pennsylvania Pipe Line Oil:** $1.57; **Eureka Pipe Line Oil:** $1.52; **Buckeye Pipe Line Oil:** $1.37; **Corning Crude:** $1.05.

Michigan: (Effective July 13, 1932), **Midland:** 85 cents a barrel. **Muskegon:** 76 cents to $1.00 a barrel.

Canada: (Effective Nov. 3, 1931).

Petrolia: $1.90; **Oil Springs:** $1.97.



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Resume of Geology . . . of Hopper Canyon District

Ventura County, California

RICHARD R. CRANDALL
Consulting Geologist

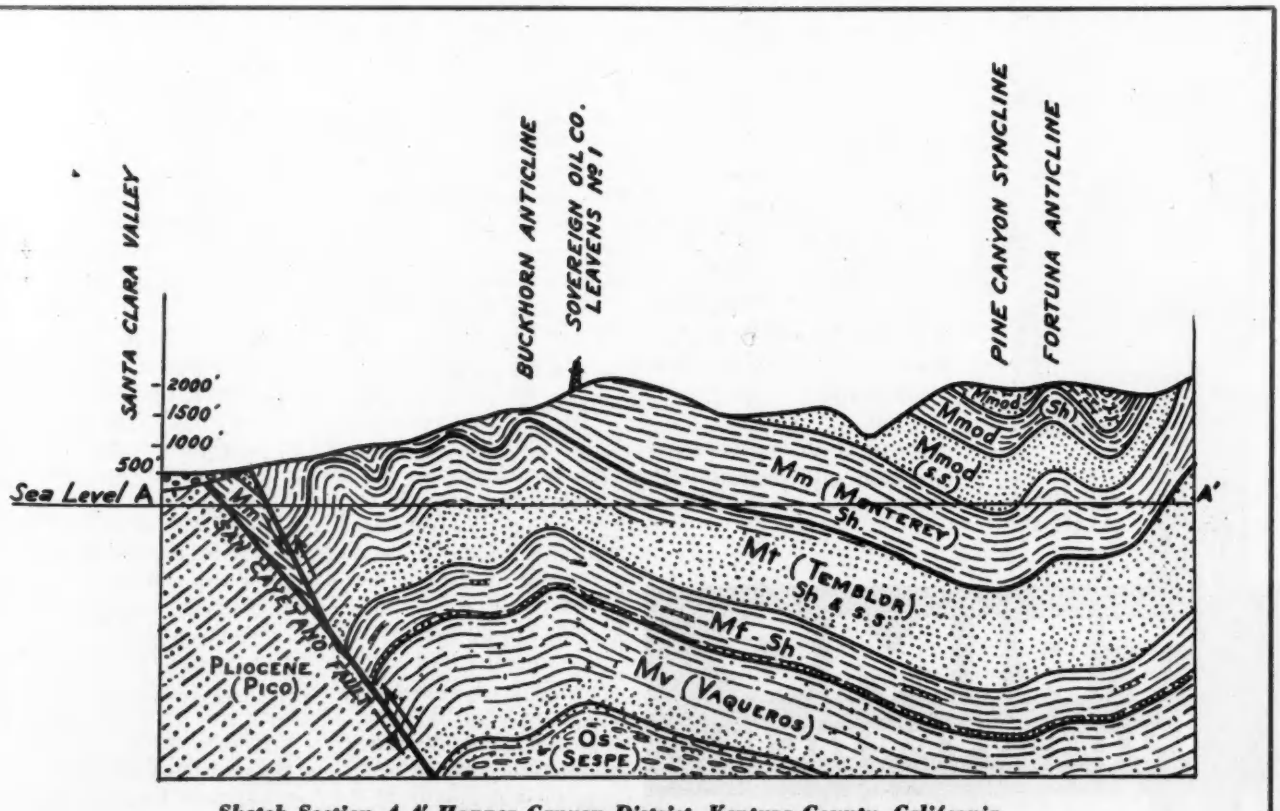
A RENEWAL of interest has been manifest lately in one of the oldest producing areas in California, the Hopper Canyon district, of which, for the purpose of this brief resume, may be considered as the area immediately north of the Santa Clara Valley, midway between the towns of Fillmore and Piru, Ventura County, California, and 50 miles north and west of Los Angeles via a paved state highway.

The district is tapped by a branch line of the Southern Pacific Railroad which traverses the Santa Clara Valley.

The first published report on the area was by W. L. Watts of the California State Mining Bureau, in 1900. George H. Eldridge surveyed the district in 1901-2 for the United States Geological Survey, as did W. S. W. Kew, Carrol M. Wagner, Walter A. English and John P. Buwalda in 1917-18, in connection with a survey of a large part of Los Angeles and Ventura Counties. The most recent and detailed work was done by Frank S. Hudson and E. K. Craig in 1927-28, full credit being due them for unraveling the complicated stratigraphic and structural problems that are present.

The topography immediately north of the Santa Clara River Valley (elevation 500-600 feet) is exceedingly rough, mountainous and of comparatively youthful aspect. The higher mountains attain elevations exceeding 4500 feet and the relief is as great as 1200 feet in a distance of slightly more than one-quarter mile. The canyons that dissect this mountain mass are steepsided and V-shaped a short distance from the Santa Clara Valley proper.

The sedimentary rocks, exposed in the vicinity and present at depth, range in age from Recent to the Eocene and older. The formations believed to be reservoirs for commercial quantities of petroleum are the Monterey, Temblor and Vaqueros Formations of the Miocene and the Sespe Formation of the Oligocene. The potentialities of the Eocene section are un-



Sketch Section A-A' Hopper Canyon District, Ventura County, California.
(Section shown is approximately 18,000 feet)

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known and doubtful. The accompanying table indicates the character and thickness of the formations present:

Age	Formation	Character	Thickness Feet
Recent		Alluvium, land slid detitius	0- 50
Pliocene	Pico	Shale, sandstone and conglomerate	10,000 ±
Miocene	Santa Margarita (Modelo)	Siliceous shale, limestone, cherts and siltstone	700 ±
	Monterey	Sandstone with minor shale lenses. Stained with bitumen in structurally higher portions of area ...	800 ±
	Temblor	Upper shale: Brown shales with minor cherty shales, limestone and sandstone, Yields small amount 14° Gr. oil on Fortuna Anticline	700 ±
		Lower Sandstone: Massive sandstone with minor conglomerate and shale. Productive in Fortuna, Modelo and Sunset fields	0-3000
		Lower Shale: Bituminous shale	700 ±
	Vaqueros	Siltstone, sandstone with minor limestone. Extremely productive in Elwood Field, Santa Barbara County 1100-3000	
Oligocene	Sespe	Conglomerate, sandstone and siltstone. Characteristic maroon color. Productive at South Mountain, Bardsdale, Shiell's Canyon, Elwood and other localities	3500 ±

Structure

The area under discussion is bounded in a structural sense by the Pine Canyon Syncline on the north and the San Cayetano Thrust Fault on the south.

Pine Canyon Syncline is a major structural depression with a general east-west to southeast trend traceable from the vicinity of Pine Canyon west of Sespe Creek easterly to Piru Creek. The structural "low" on this fold is in the north half of Section 15-4n-19w.

Fortuna Anticline lies immediately south of and approaches to within 750 feet of the Pine Canyon Syncline in the vicinity of Hopper and Tom's Canyons. The fold is very sharp and restricted with a closure of some 75 feet, the structural "high" being found in the vicinity of Hopper Canyon.

Buckhorn Anticline is easily the dominant upwarp of the district. This fold lies midway between the Pine Canyon Syncline and the San Cayetano Fault, three miles to the south, and is traceable from the vicinity of Sespe Creek southeasterly to Sulphur Mountain and thence northeast to east past Hopper and Nigger Canyons to Piru Creek, a distance of eight miles. The Upper Temblor Shale, previously termed the middle shale member of the Modelo, outcrops along the structurally higher portions of the fold but in greater area and at an elevation of 1100+ feet higher than on the Fortuna Anticline. The mappable closure exceeds 300 feet with the structural "high" being one-half mile east of the crest of Sulphur Mountain, near the west line of Section 23.

A number of small anticlines and synclines are present, plunging sharply away from the higher part of the Buckhorn Anticline. Lack of closure on the other small structures present or their promixity to the San Cayetano Fault would seem to make the possibility of securing commercial production on them, from the Miocene or Oligocene formations, extremely remote.

San Cayetano Fault bounds the area on the south and skirts

the northern edge of the Santa Clare Valley. This major break is traceable from the vicinity of Piru, westerly for 40 miles, to Rincon Point in Santa Barbara County. The displacement along it is measured in thousands of feet and in the area under discussion, movement along it has resulted in Miocene strata being pushed up and over later Pliocene beds on the south side of the fault line. The fault itself should be an aid to the accumulation of petroleum in such structures as the Buckhorn Anticline in affording additional drainage area and available source beds in every way comparable to the favorable effect of the Santa Clara Fault to the south on the South Mountain, Bardsdale and Shiells Canyon oil fields.

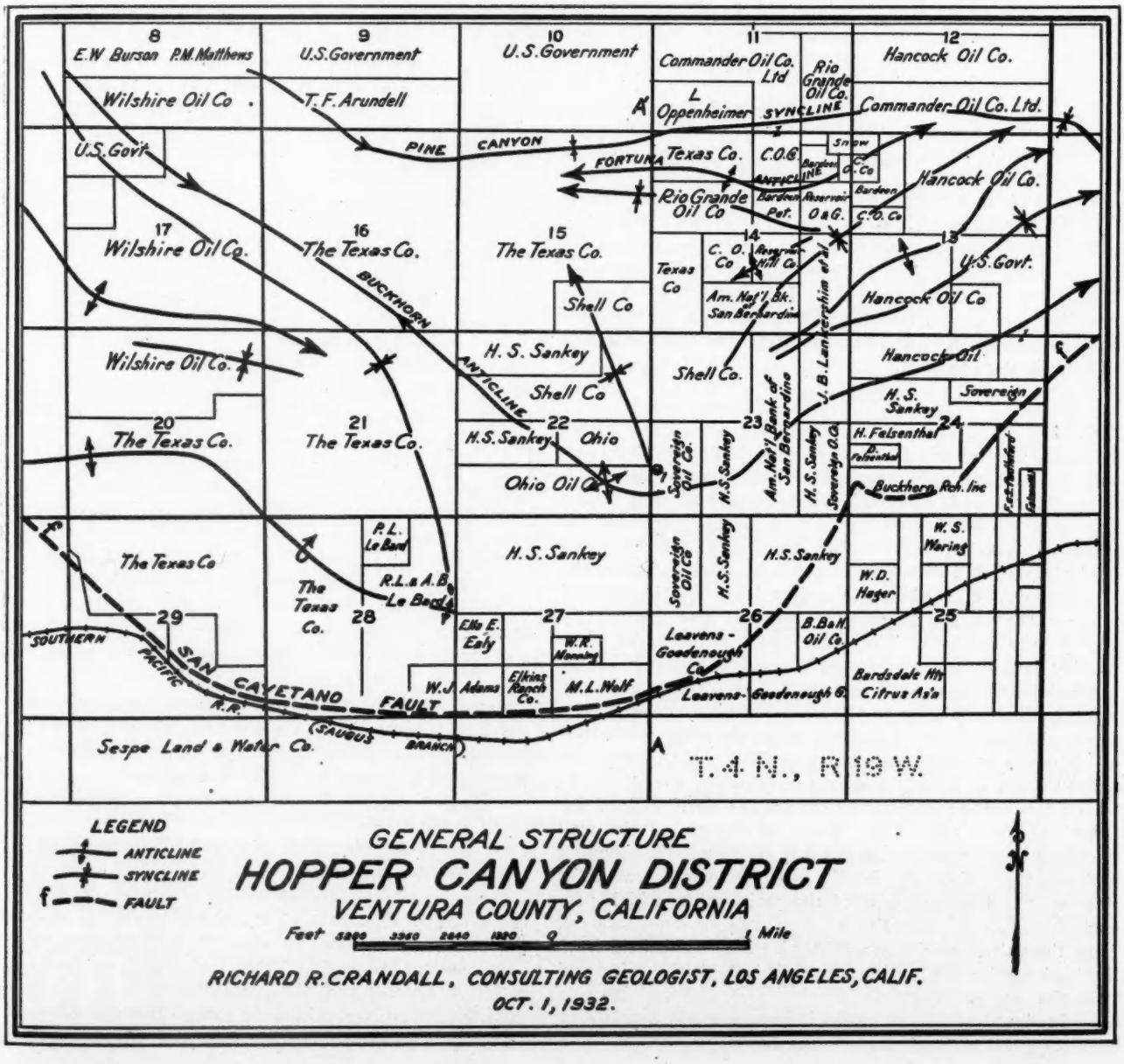
Development

The district has produced a small quantity of petroleum from shallow depths for many years, the previously mentioned Fortuna Anticline being first developed in 1884. Wells were secured here in the Upper Temblor Shale, having a maximum initial production of 75 barrels per day of 14° Be. gravity oil. The deepest holes were bottomed in the vicinity of 1000 feet. A few of these wells are still capable of yielding 10 barrels per day.

The Sunset and Modelo Canyon fields, located on structural terraces on the Topatopa Anticline, immediately north of the district discussed, both yield small quantities of oil at shallow depths from the lower Temblor sandstone.

Full credit for the pioneer work in demonstrating the deeper possibilities of the area must go to H. A. Bardeen, independent operator of Los Angeles, who has developed a well in the Lower Temblor sandstone having an initial production of 200 barrels per day and later settling to 125 barrels per day of 32° Be. gravity oil with a gasoline content of better than 42 per cent. This well, No. 1-B, located in Section 13-4n-19w, near the crest of the Fortuna Anticline in Hopper Canyon, encountered the Lower Temblor sandstone at 1395 feet. The shallow producing zones in the Upper Temblor shale, together with some water horizons, were shut off with 8⅝-inch casing cemented at 1390 feet. Oil sand with minor shale beds were penetrated to 2434 feet where the well was bottomed in oil sand. Well No. 2 has not, as yet, been placed on production due to mechanical trouble.

Numerous, poorly located tests have been drilled throughout the district to depths insufficient to afford adequate tests. The well now being drilled on the large and untested Buckhorn Anticline by Sovereign Oil Company of Los Angeles will be watched with interest inasmuch as the prospects of developing production from the Lower Temblor sandstone, the Vaqueros and Sespe formations appear to be most favorable.



Clean-Out Tool

Uses Fluid in Well

for Pump Action

GEORGE REID

Staff Representative

DURING the past two years while the price of crude has been low the tendency of producing wells to sand-up and require cleaning has been a more important problems, because of the costs involved, than when crude prices were higher. Plugged up wells have always been a burden to the producing department and when price is low and costs remain high, such remedial work is often postponed and the wells neglected. Such a condition has brought about the perfection of improved clean-cut tools and devices, designed for operation with lower cost, for marked savings in time.

In using the newer types of bailers, or sand pumps the devices call for only some hand tools, a portable hoist and the pump, doing away with the cable or other tools and the necessity for rigging up, which effects savings in time and marked reduction in expense of cleaning out sanded wells. One of the new type of clean-out tools, called the Smith Hydrostatic Sand Pump, eliminates the use of cable tools, is used where there is at least 200 feet of fluid in the well and utilizes the hydrostatic pressure of the fluid as the motivating force. In its operation the device takes a volume of air at atmospheric pressure in one section which is sealed by means of a valve, having a second section below, with the arrangement for automatic functioning in such manner that a fluid plunger is created. The transfer is sufficiently powerful to pick up hard sand, rubbers, millings, and other junk, to clean perforations and remove all types of foreign matter from the well that can be forced into the bottom section.

Assembly

The hydrostatic sand pump is assembled in three major sections. The bottom is attached to a 20-foot tubular section and this assembly comprises the "loading tube." A safety valve, head, and syphon tube assembly is attached to a second 20-foot tubular section, and this comprises the upper or "suction" tube. The main valve, machined of solid alloy steel, and which permits the functioning of the complete device, is about three feet long, and is screwed between the load tube (bottom section) and the suction tube (upper section). The assembled pump is run with suitable jars, as a safety measure.

A unique and extremely simple design of valve mechanism contributes wholly to the successful operation of this pump. As shown in the accompanying drawing, this valve, which controls the flow or entry of fluid into the upper or suction tube, is always closed except when the device is set on bottom, or when it is set on the derrick floor for dumping. When the pump is set on bottom of the well the upper section of the main valve is telescoped, dropping until the tip of the valve itself comes into contact with the riser on the lower section of the main valve, which protruding tip forces the valve upward, raising it off its seat. Thus the valve permits the sudden rush of clean fluid from the loading (lower) section, upward through the valve and into the upper (suction) section, compressing the air brought down under atmospheric pressure and tending to equalize pressure with that of the lower section.

The main valve is fitted into a thimble (as shown in the drawing) and in this thimble there is a small spring. The upper portion of the valve is a piston upon which cup leathers are placed. The valve is drilled to allow pressure from the load tube below to gather behind the cup leathers which permits equalization of the pressure behind the valve to that pressure below it. Thus the only force to overcome when the valve is tripped by setting it down on the derrick floor is that downward force exerted by the small spring placed within the thimble into which the valve is fitted. This simple and rugged construction assures long life and absence of disorder through elimination of working parts.

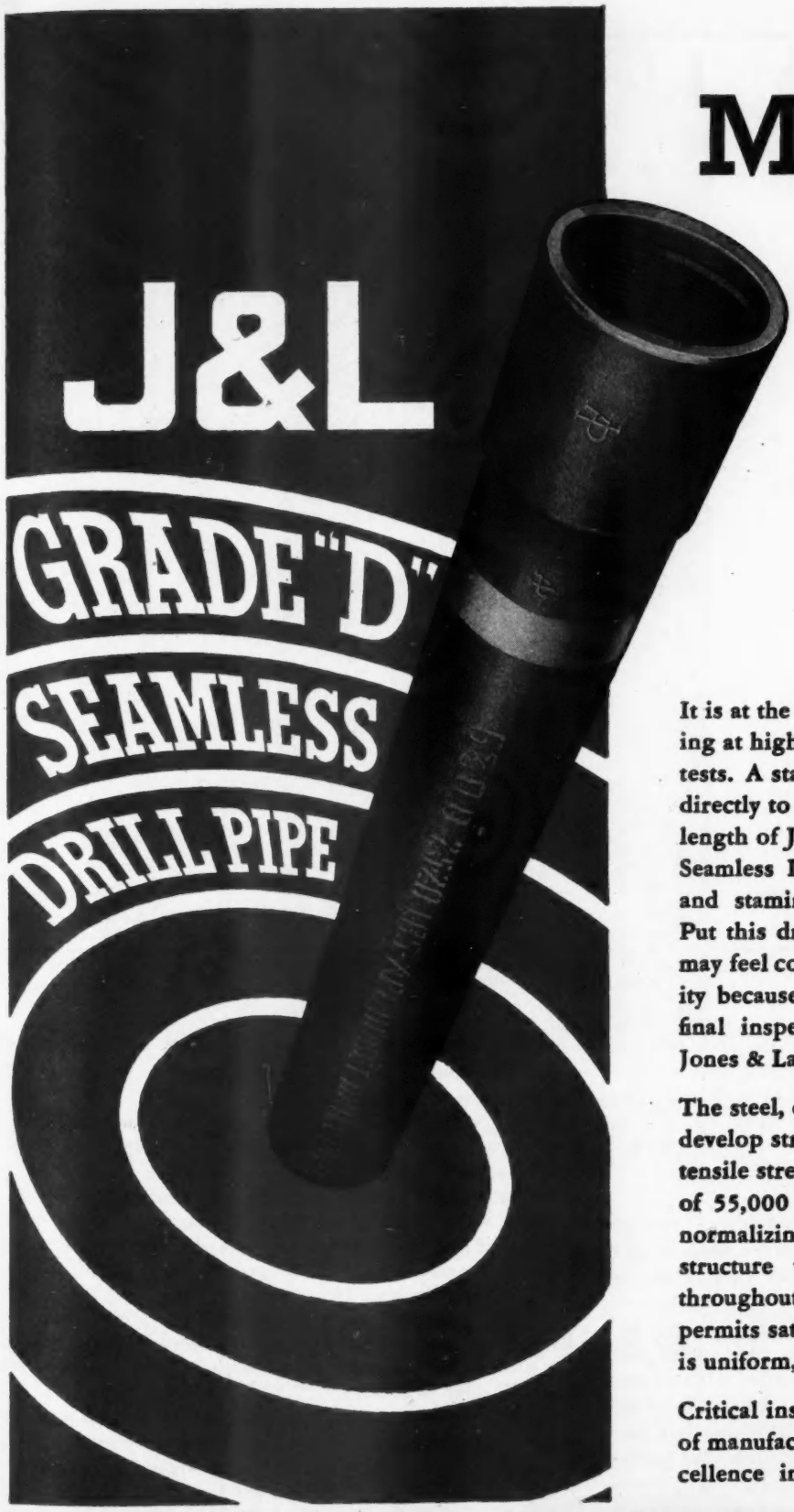
The whole valve assembly is centered by means of several flanges and is removable at will. Valves and seats can be refaced several times. The upper spring is installed for the purpose of preventing the section from telescoping when running in the hole, or when striking the fluid column, or otherwise opening the valve below before it should be opened.

How It Works

The sand pump is run on the sand line to the bottom of the hole and the fluid there occupies the load tube (lower section) at whatever hydrostatic pressure exists at that point. Since the upper suction tube is separated from the load tube or section by the closed main valve, then the upper section contains only air at atmospheric pressure so long as the valve is not tripped. Upon reaching the bottom of the well the main valve telescopes, raising the valve off its seat, and permits the fluid from the lower load tube to rush into the suction section, through the large fluid passage, which as previously stated, compresses the air in the upper section of the device and creates a powerful suction at the bottom.

As the toll is lifted off bottom the main valve returns to its seat. As it rises out of the hole the pressure decreases on the outside of the device and the safety valve releases the inside pressure causing the compressed air to force some of the fluid out of the suction or upper tube, through the small syphon tube, but retaining sufficient air under pressure to completely purge the system when the device it set down on the derrick floor.

Little or no foreign matter (sand, soft rope, mud, etc.) can come in contact with the main valve for the reason that the lower section becomes filled with clean oil in the upper part of the well as it descends. Then when the pump is set on bottom and the valve tripped, it is this clean or relatively clean oil which is forced upward through the valve and into the suction section, while the lower or load-



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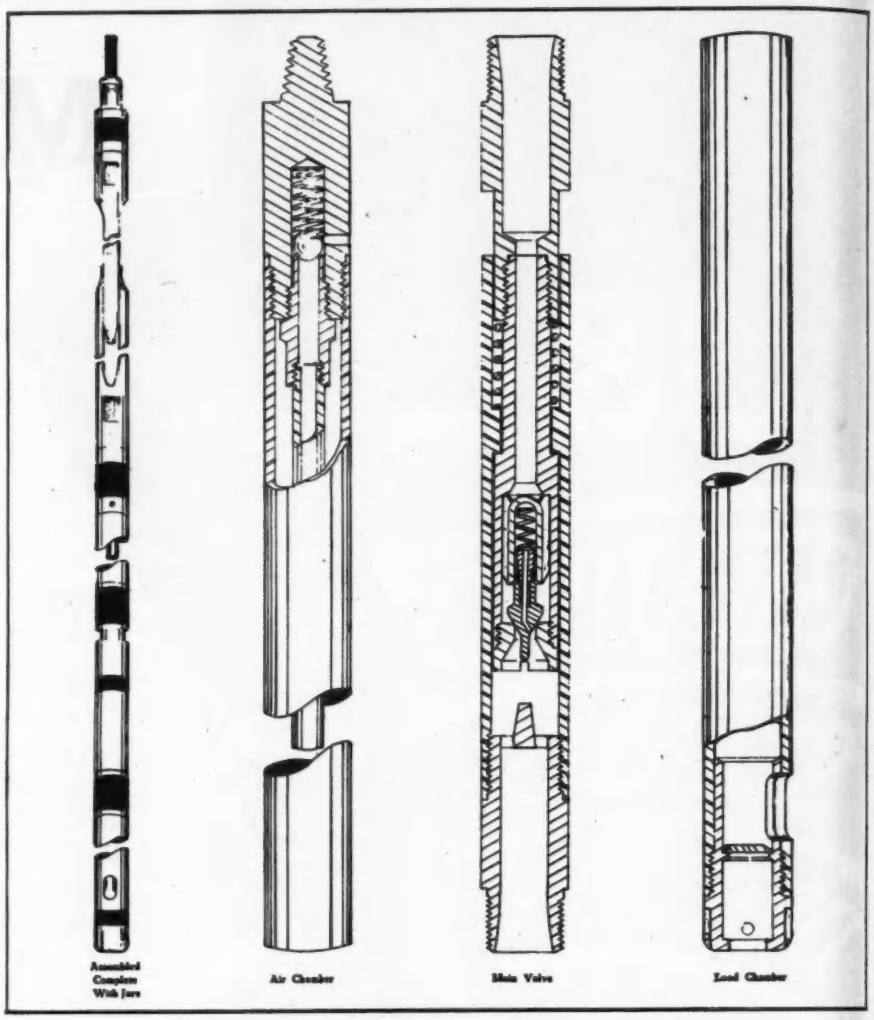
ing tube becomes filled again, and this time with the sand, mud, cuttings, and other foreign matter plugging up the well to be cleaned. As soon as the device has cleaned itself, when set on the derrick floor, the tool is immediately run back into the hole and there is no question as to whether the valve is seated for the reason that as soon as it is picked up the valve automatically seats itself and the device is again ready for operation.

The Smith Hydrostatic Sand Pump has been in use among California operators for some time. Reports state that important savings in time are effected and good cleanout results secured. During the past year the tool has been thoroughly tested in various Mid-Continent fields under the supervision of E. L. Decker of Martin Decker Corporation, manufacturers of the device. Time savings are apparent when it is noted that wells can be cleaned out by simply running the sand line without the use of cable or other tools, and often the cleaning out can be completed in the same time that would be required for rigging up or getting ready to clean the wells. Often, all the equipment that is needed is a sand line, a few hand tools, the sand pump, and a portable hoist.



Smith Hydrostatic Sand Pump Construction Details

In addition to ordinary well cleaning the tool is being successfully employed as a regular bailer with cable tools; for cleaning out wells that have been shot with glycerine, and has proven effective for cleaning out liners of both the screen or perforated type.

As Perforation Cleaner

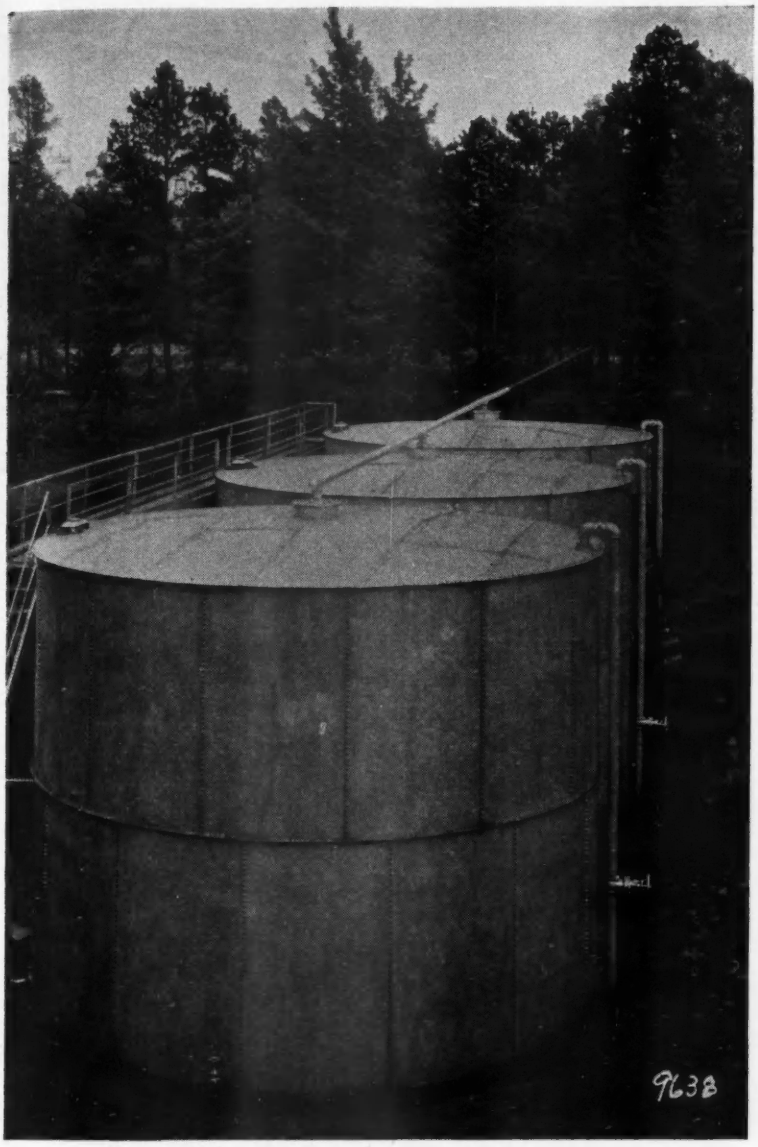
In one of the Long Beach wells, for example, it was desired to use the Smith Sand Pump to clean out sand. It was found upon running the pump that the perforated pipe contained a 30-foot sand bridge several feet off bottom. This bridge was removed with the pump. The owners then decided to wash the perforated liner with a hot oil, packed-off washing tool, but on running the washer it was found that the only point where circulation could be secured was at the point in the liner where the sand pump has been used to clean out the bridge and at a point near the bottom where sand had been removed with the hydrostatic pump.

The pump was then employed as a perforation cleaner, and by blanking off the bottom and drilling holes in the side of the pump near the bottom, a direct suction was placed opposite the holes in the liner. The sand pump was run a few times on bottom, and then by attaching a pipe nipple two feet long to the bottom of the pump, suction was applied to the perforations two feet off bottom. Then a four-foot nipple was used, and so on up to 30 feet off bottom, after which the washer was again run and it was found that circulation was easily secured. There followed an increase in production from the well so treated with much increased time of producing before cleaning was again necessary.

In the Santa Fe Springs field where it is desired to plug back many of the deep sand wells to the shallower zone, the pressure sand pump has found another application. It is costly to drill out through the pipe and set a new liner in these wells. The new practice involves setting a plug in the casing just below the shallow sand to be produced, and running a perforating tool to perforate the casing (sometimes cutting through two strings of pipe). Then the well is swabbed and the sand pump run into it with satisfactory results in getting the well started producing. The cost is but a few hundred dollars, as compared to a few thousand under former practice.

Another test in West Texas points to the time saving factor. In this area a sanded well was flowing by heads twice daily. In four days, working eight hours per day only, 240 feet of hard packed sand, shale and rocks, was removed. Since cleaning, the well flows two to three times hourly. It was estimated that in using cable tools and conventional clean-out methods the time required would have been at least two weeks, possibly 30 days.

It is interesting to note that the device effectively removes such material as broken tube slips, iron and steel millings after a milling job had been done, swab rubbers, soft rope, rubber packing, nitro-glycerine tins, rock, drilling mud and sand. Special bottoms, or shoes, for use with the sand pump have been built for fishing work.



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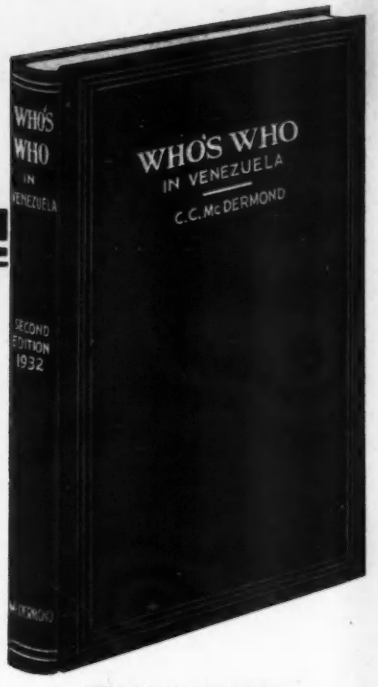

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in VENEZUELA

By C. C. McDERMOND

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Hydraulic Pump *Handles Paraffin Crude at* Minimum Cost

BRAD MILLS
Staff Representative

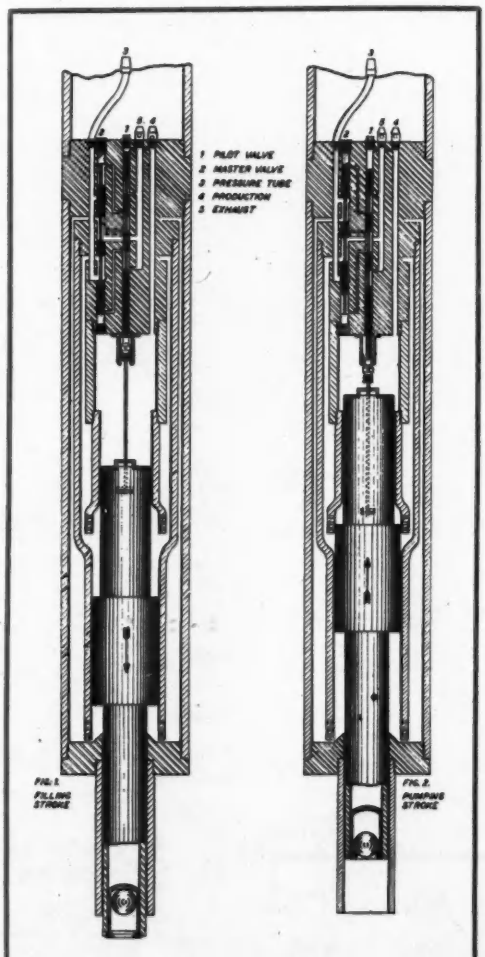
PRODUCING oil with an actual lifting cost of less than one cent per barrel and at a total cost of less than eight cents per barrel, Western Gulf Oil Company (Gulf Oil Corporation in California) has established an exceptional record in the operation of its No. 1-KCL-C, a Fruitvale well which has been pumped continuously for 15 months with a new type hydraulic pump. Operation of the well without interruption for such a long period is alone an unusual achievement, but the extremely low cost per barrel is hardly to be expected with any type of pumping well.

The cost of eight mills per barrel naturally represents only current charges; such as electricity; natural gas; repairs of all kinds; pumper's time in checking surface equipment, changing charts and generally inspecting the installation; and other expense items. By adding lease supervision, executive supervision, depreciation and other charges usually made against an individual well or lease, the cost per barrel may run as high as eight cents. The life of the pump and equipment will have much to do with the ultimate cost per barrel.

The hydraulic pump in use in No. 1-KCL-C is run on tubing and set near bottom of the hole. It operates by pressure from the surface, the power being supplied by a small electrically driven pump which circulates clean, heated oil through a small macaroni string which is run inside the larger tubing.

Paraffin in Fruitvale crude has been the source of much trouble where old pumping methods were used. The oil is normally very cool and pulling and cleaning out of tubing has been an expensive item. The value of raising the temperature of the oil produced was appreciated long before actual installation of a hydraulic pump was completed. Producing the wells on small chokes retarded the accumulation of paraffin, but all pumping wells were particularly susceptible to the trouble. Some of the "colder" wells would produce only a short time before showing the effects of a heavy accumulation in the tubing. Raising the temperature of the oil seemed to hold the greatest possibilities.

Placing of the hydraulic pump in the well was not the original installation of this type, but much of the arrangement of the surface equipment was worked out to meet conditions in the Fruitvale field. Running of the mechanism down on the end of the larger tubing string is certainly a radical departure from old pumping methods, while the running of a smaller macaroni string to furnish the power to operate the submerged pump is also novel.



Diagramatic Scheme Only of Gage Hydraulic Oil Well Pump, Manufactured by D. G. Bevis Corporation, Los Angeles.

No Rods

Elimination of sucker rods has been accomplished by use of the hydraulic pump. After the pump was installed 15 months ago operation has been continuous, with no necessity for any major adjustment. No. 1-KCL-C does not appear to be crooked, but possibility of sucker rod trouble because of this condition has been definitely avoided.

No. 1-KCL-C is not a large producer, having averaged above 100 barrels per day during the 15-month period. It is located near the edge of the field and produces some sand and a small amount of water. It might be termed a typical Fruitvale well, although some producers act better and others act worse.

The Gage hydraulic pump was run on the bottom joint of three-inch tubing and set at the best pumping level. The well was completed at 4007 feet, but tubing was run considerably short of bottom. The small 1½-inch macaroni string used to convey the heated oil was run and screwed on after running the larger string.

Pump Action

The action of the pump is comparatively simple and might be termed automatic. The clean, heated oil is forced down to the pump through the 1½-inch inner string. The pump is ostensibly a steel cylinder, having two openings at the top. One opening admits the tube conveying the actuating oil to the pump, the other allowing the oil produced to discharge from the pump into the three-inch tubing.

The clean actuating oil pumped from the surface is sent to the pump pistons through automatic springless

valves at a higher pressure than is applied to the production oil being raised through the three-inch tubing. This pressure differential results in the leaking past of the higher pressure clean oil through the sealed surfaces toward the lower pressure oil being pumped. This leaves a film of clean oil on the pumping plunger to insure lubrication.

The oil being pumped from the well naturally contains abrasive substances, but due to the difference in pressures, only the clean crude comes in contact with the moving parts of the pump. Isolation of the oil, returning from the well, which contains the sand and grit has reduced replacements to zero thus far.

The suction and lifting action of the pump is controlled by means of a synchronizing pilot and master valve. The down stroke of the plunger piston is the filling stroke, while the up stroke is the lifting or expelling stroke. The pump has a very slow motion and operates with a seven-foot stroke. The stroke of the pumping piston is constantly under control of the pilot and master valve. These valves are actuated by the volume of clean oil circulated from the surface under pressure, the number of strokes being regulated by the operator at will.

A study of the well action, pressures, daily production, fluid level and surface equipment has made it possible to obtain an even production at a minimum expense.

When the pump was first installed 15 months ago, production for a short time was higher than the average which followed. This was apparently due to the high fluid level which was present when pumping started. This fluid level rapidly receded to the point at which the formation started giving up oil at about the rate of production. Fruitvale wells stand almost full of oil, but the level is not difficult to lower. When this level has been reduced to what might be termed a critical level, it is replaced at about the same rate by the formation. A study of pressures and circulation readily shows the best production rate.

The Gage hydraulic pump installed in No. 1-KCL-C has an overall diameter of 5¼ inches. It has an actual horsepower of 15.5 and a theoretic horsepower of 10. The horsepower efficiency is about 63 per cent, with a rated production of 375 barrels at 10 strokes. Since the pump is operating considerably slower than the averages on which the calculations are usually based, the maximum capacity is much greater than the daily production at this well indicates.

Only clean oil is being circulated to the pump, but the production return includes both the oil from the formation and the oil which actuated the pump. The heated oil is nothing more than clean Fruitvale crude which has been raised to a temperature of 130°-150°F. After the oil under pressure has actuated the pump, it naturally loses much of its heat, but the production return has a temperature of about 110°F.

About two-thirds of the oil returned through the production column is the crude pumped down to actuate the pump, two gallons being circulated to obtain one gallon of new production. The heat transfer from the in-going oil through the macaroni string to the production column is substantial.

A small 2x6 pump is used to circulate the oil. This surface pump is driven by a 10-horsepower electric motor. The pressure varies from 100 pounds to 380 pounds, depending upon what portion of the stroke is considered. A vertical accumulator is hooked into the oil circuit to reduce the surge in the line. This is nothing more than a short joint of pipe which acts as a small storage chamber in the macaroni line to the submerged pump.

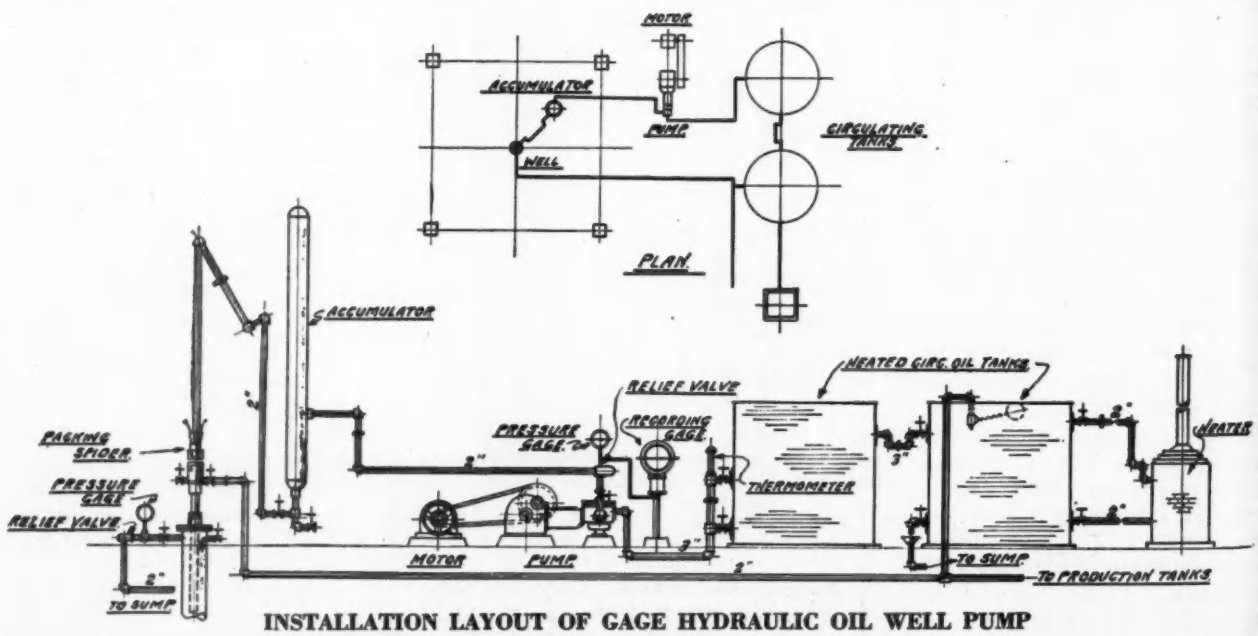
The surface layout is comparatively simple. It includes a small coil heater which uses natural gas from the well, two small circulation tanks, recording gauge, pump, motor and accumulator.

Fruitvale wells do not produce much gas, but the flow from No. 1-KCL-C is more than sufficient to heat the circulated oil. This is gas which might not be used otherwise. The heater uses only 40,000 cubic feet per month.

The hydraulic pump is operated at slow speed, the average being about four strokes per minute.

A relief valve has been installed on the surface from a tee in the macaroni string as an added safety feature. When the line pressure becomes excessive, the oil is circulated to the sump and no damage is done. A packing spider is used between the macaroni string and the three-inch production string.

Western Gulf Oil Company operates another well in the Fruitvale field with a similar hydraulic pump, and is considering the installation of two additional units. The other installation operates at a pressure of 260-660 pounds.



INSTALLATION LAYOUT OF GAGE HYDRAULIC OIL WELL PUMP

As used by Western Gulf Oil Company on a successful installation in the Fruitvale field in California, the actuating oil is heated by gas from the pumped well, the heated oil, introduced at the rate of two gallons for each gallon of new production, raises the temperature of the production to prevent clogging by paraffin.

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DIAGRAMMATIC enlargement of a deposit of Haystellite-Composite Rod, showing the hard, tough particles of Haystellite ready to form numerous small sharp teeth. (Left)

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Photoelectric Relay *Regulates Water Level in* Dehydrating Plant

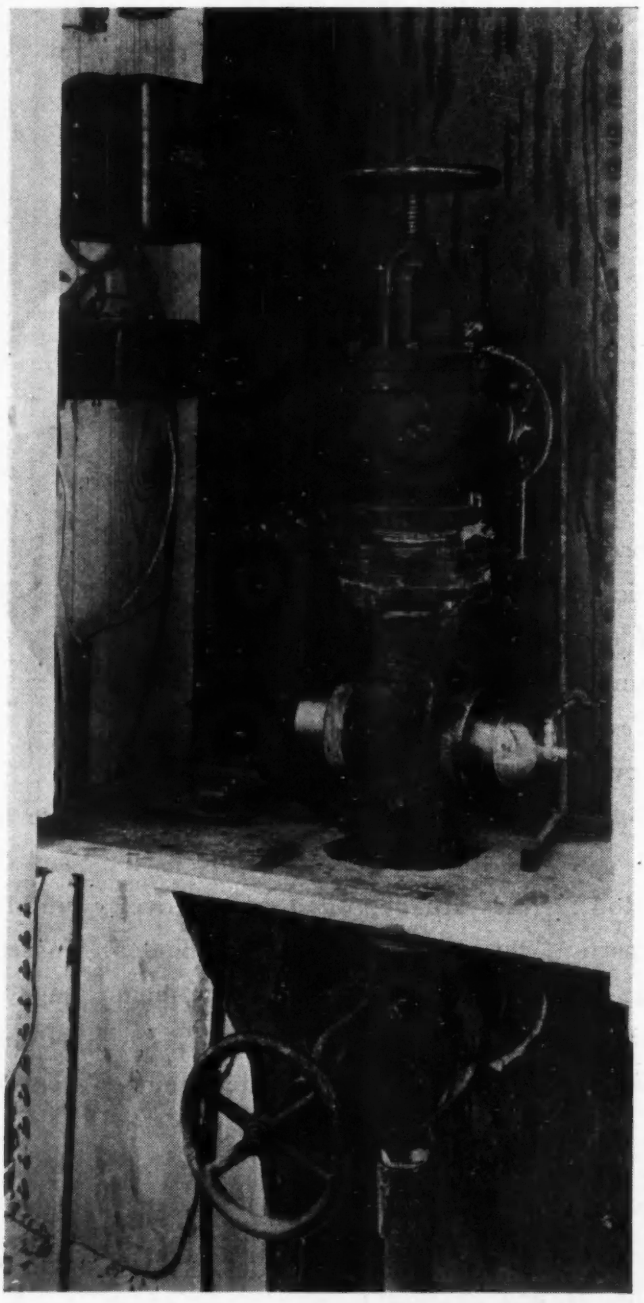
BRAD MILLS
Staff Representative

A UNIQUE application of the photoelectric relay has been made by Chanslor-Canfield Midway Oil Company in the Midway district to regulate automatically the water level at dehydrating plants or tanks. Use of this very sensitive arrangement for this purpose is strictly original, so far as is known by the company, and it seems to hold promise in districts where cut oil is handled in large quantities from producing wells.

The photoelectric relay has had a wide application, but it is none the less remarkable when applied to the dehydration of oil. The controlling element is a photoelectric tube. With the proper voltage on the tube, the current which will be passed through it is proportional to the amount of light shining on the tube. The current generated by this light intensity is amplified by a three-element tube similar to a radio tube, which in turn operates a sensitive relay. This relay supplies current to a magnetic switch.

The dehydration problem was one of long standing and had required the attention of one man much of the time. Wells on this large lease make a large percentage of water which separates readily from the oil.

Where production from a large number of wells was gravitated to a common receiving tank, the water level was subject to sudden changes. The gauger was forced to keep close watch on the receiving tank to avoid approach of the water level toward the suction of the shipping line near the top.



Photoelectric Relay Installation on Receiving Tank to Regulate Water Level.

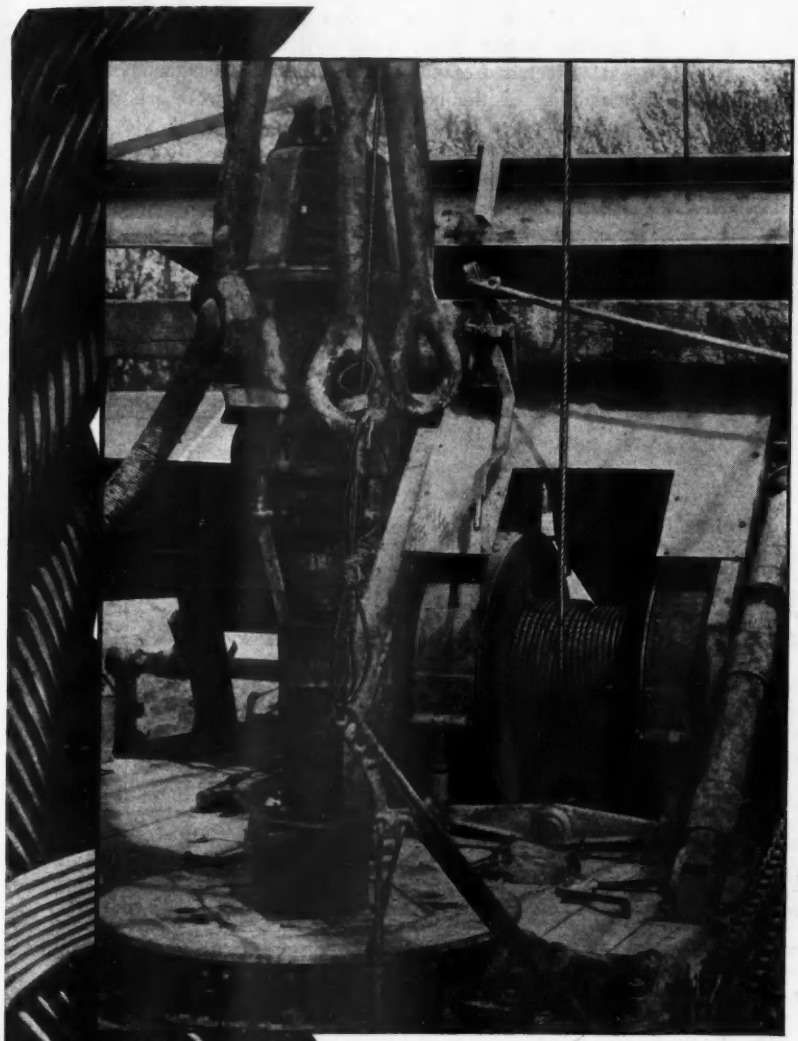
The oil and water in the gravity flow lines from wells was particularly affected by temperature changes. The free water was a very valuable agent in the flow to the receiving tank from the slow pumping wells, practically washing and floating the crude through the line.

These gravity lines are above ground and drop uniformly and very gently toward the receiving tank. Being exposed to the weather, the combined flow of oil and water was fairly uniform during the heat of the day. The gauger knew about what to expect during these hours, but during the night or during cold weather, the water continued to run under the oil while the thicker oil refused to be washed through the line. This resulted in a heavy flow of water and a rapid rise of the water level in the receiving tank. A rise in temperature reduced the water flow and increased the volume of oil by a wide margin.

One large receiving tank was used to receive and separate production from more than 60 wells on slow pumping installations. The combination tank is practical, because of the easy separation of the oil and water. The crude pumped out of the upper part of the tank is pipe line oil.

Before the installation of the photoelectric relay, a series of outlet gauges were provided along the side of the tank to guide the gauger. This necessitated a constant watch to hold the water level below the suction of the line handling clean oil for market.

Chanslor-Canfield Midway



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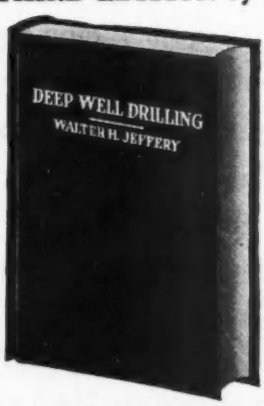

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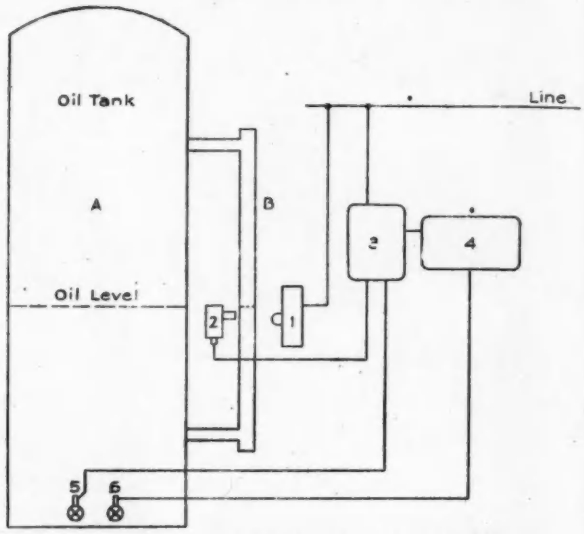
Oil Company petroleum engineers first conceived the idea that the photoelectric relay could be used to maintain a fairly constant water level. They conducted experiments with General Electric Company engineers and were able to show the feasibility of the plan. It was necessary to use a large rectangular glass and keep the temperature of the heavy crude above 120°F. to prevent clinging of the oil to the glass and making it inoperative. This was expected, as various sight glasses had become dirty and useless when employed with old methods.

The first field installation was made as outlined by the accompanying sketch, but changes were made later.



A—Oil tank. B—Vertical tube. 1—Light source. 2—Phototube. 3—Relay. 4—MCll relay. 5—Solenoid valve. 6—Solenoid valve (auxiliary).

A rectangular glass tube B, representing the oil tank, was connected to the tank A and the phototube "2" was placed near the glass tube. A light source "1" was located on the other side of the tube so the light could enter the phototube when the water level rose high enough. Relay "3" then closed and energized the solenoid valve "5", and at the same time started the MCll relay "4". When 15 minutes, or any desired time had elapsed, solenoid valve "6" was opened. When the water level fell so that the oil shut off the light, the valves were closed. Laboratory experiments were so successful that success of a field installation was clearly indicated.

In the actual field installation, the second valve "6" was not necessary, as the main valve "5" readily handled the water.

Some trouble from surging and turbulence was experienced with the field installation when the small vertical column outside the tank holding the glass tube was connected to for a line nearly as high as the tank. Shortening of this line reduced the bobbing of the fluid to a minimum. Previously, the surging of the water-oil line had caused the photoelectric relay to function too soon when light was admitted through the tube.

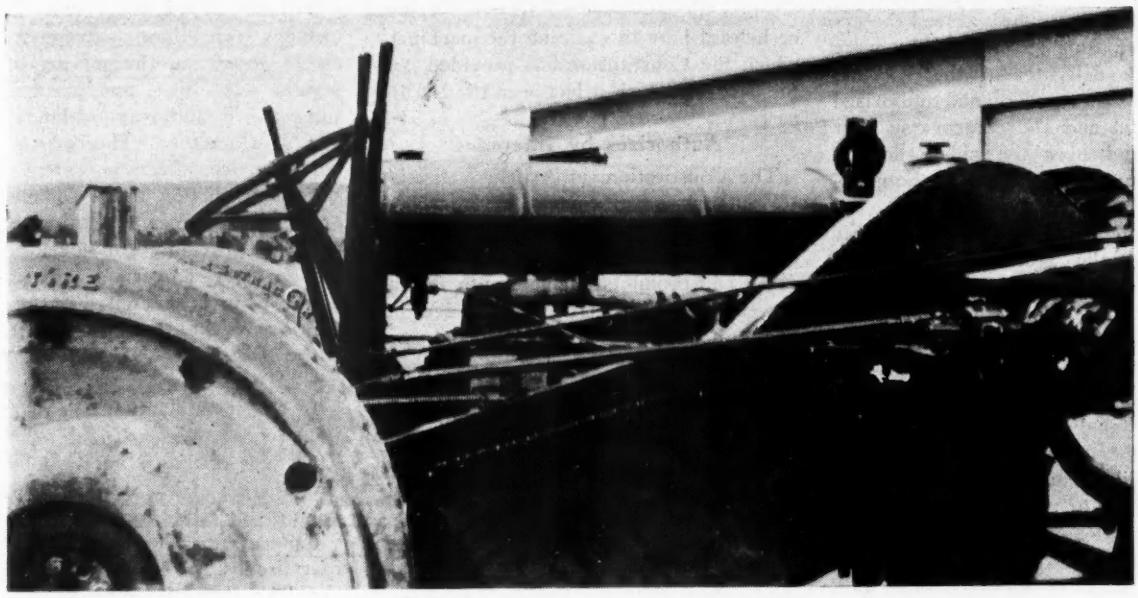
Crude with a low temperature has also caused some trouble. Use of coils in the separation tank has aided separation, while helping the photoelectric relay to function properly. The water would not wash the cold oil off the glass tube to permit the ray of light to operate the relay. Heating the oil to 120°F. or above caused a sharper separation and a clean glass tube.

Briefly, the photoelectric relay works on a light ray principle. When the light is shut off the valve is closed, and when the light source strikes the phototube, the current generated is increased by the grid tube. Operation of the sensitive relay and the tank valve follow. It is obvious that the black oil and transparent water are the operating mediums.

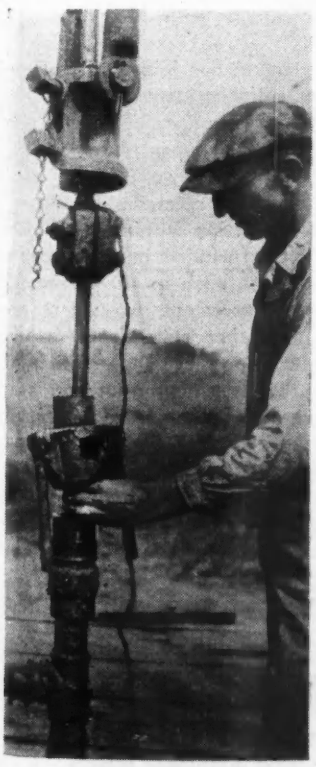
The water is metered from the tank to help provide a check against the individual well meters. Pipe line oil is pumped from the top of the receiving tank.

FIELD HINTS . . .
from Here *and* There

Photographs furnished by the Department of Accident Prevention, American Petroleum Institute

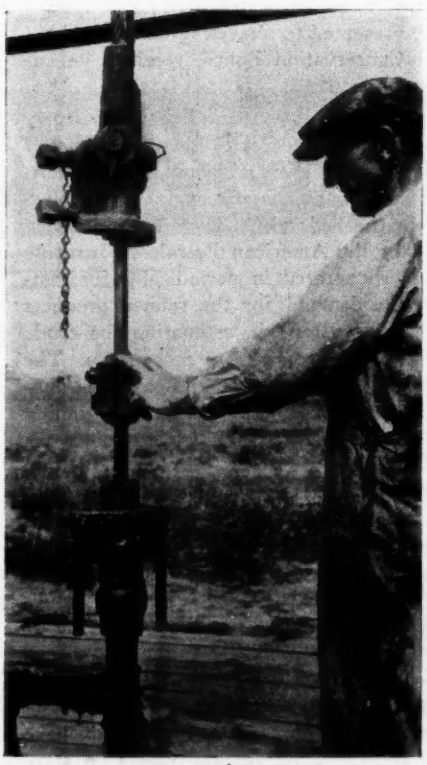


A thoughtful foreman and the lease welder provided protection for the moving parts of this tractor winch so workers cannot be caught in the chains or sprockets.



Stuffing boxes have mashed the fingers of many a pumper.

Clamp the stuffing box or tie with a string so it cannot fall.



To feel pick-up, place fingers so they cannot get caught.

The Interdependence of the States In Oil Conservation
(*Continued from page* 16)

the Attorney General's opinion, the board suggested to the Institute that it go to the states as a source of authority and seek their cooperation through an interstate agreement.

At a meeting at Colorado Springs which followed, the plan of an interstate compact was again advanced by Secretary Wilbur, and the principle received the approval of the four governors who were present. The delegates of the principal oil states, however, were not authorized to participate, and the controversy over the tariff and over the public domain largely obscured the purpose of the meeting.

Further suggestions of this method may be found in the Secretary of the Interior's annual report for 1931, and in Secretary Lamont's address to the American Petroleum Institute in November, 1931.

In the spring of 1931, confronted by the crisis precipitated by East Texas, the governors of the Mid-Continent region initiated the Oil States Advisory Committee, for the purpose of ultimately bringing the states into some form of interstate agreement. In September, 1931, it will be recalled that the states of Oklahoma, Kansas, and Texas, through their governors and regulatory agencies, entered into an informal production agreement. The program of the Oil States Advisory Committee, presented to a meeting of the Federal Oil Conservation Board, received its encouragement.

Over a two-year period the oil industry has experimented with the rudiments of a system of national planning. Committees of economists and engineers appointed by the Federal Oil Conservation Board and by the American Petroleum Institute have cooperated in periodically forecasting the demand for the refined products of crude oil and in estimating the crude production necessary to meet them. The Federal Oil Conservation Board has published six of these forecasts beginning with the period April 1—September 30, 1930. The American Petroleum Institute has published independent studies contemporaneously. The two have been in general agreement and have constituted the charts by which the industry has largely steered its way out of the condition of chronic overproduction to one of reasonable hope. These studies have been of a purely advisory character. Some of them have endeavored to recommend state production quotas; most of them have recommended production quotas on a regional basis. Some of them have been followed fairly closely by state conservation authorities. If all had been followed present conditions would be substantially better than they are. The effort has been paralleled during 1931 by the work of the Oil States Advisory Committee which has taken the recommendations of the two committees, modified them and broken them down into production quotas for the various states. These quotas in turn have been followed with more or less care by the local regulatory agencies.

The time appears to be approaching when this growing movement toward cooperation should be put on a formal basis through an interstate agreement. It may be helpful here to examine the machinery which the Constitution has provided, and the cases in which it has been used in the past.

Authorizes by Inference

The Constitution, in Article I, Section 10, authorizes agreements by inference; that is, it prohibits agreements between the states except with the consent of congress, and prohibits alliances with foreign powers. The Articles of Confederation had authorized agreements also, and some compacts were made under it.

On 57 occasions congress has authorized interstate agreements, generally as a method for collective solution of some regional problem.

Of the 57 compacts which have been authorized by congress, 47 have also been authorized by one or more of the states concerned, and 34 have become finally effective. These exclude the so-called "enabling act" compacts between the federal government and new states.

In addition, 13 compacts have been authorized by one or more of the proposed party states, but not by congress; and of these, 10 have been placed in operation without express authority of congress.

Forty-two states have authorized compacts of one sort or another with other states.

The oil-producing states have authorized compacts as follows: Arkansas 4, California 2, Colorado 2, Illinois 1, Indiana 1, Kansas 3, Kentucky 2, Louisiana 2, Michigan 2, Mississippi 2, Montana 1, New Mexico 8, New York 11, Oklahoma 5, Pennsylvania 2, Texas 7, Utah 1, West Virginia 2, Wyoming 4.

The objectives of the 57 compacts authorized by congress and the 13 authorized by one or more states without express approval of congress, may be divided into the six following general groups. Some of these compacts can be included under more than one heading.

1. Agreements fixing the boundaries of the state's jurisdiction; that is, neither enlarging nor diminishing its authority, but fixing the area within which it is to be exercised. There is a large group of such agreements, in some of which additional powers, outlined below, are conferred.

2. Agreements conferring concurrent jurisdiction over a common area, such as common waters. Agreements of this type differ from the simple boundary agreements by effecting extension of the state's authority beyond its previous area. Generally each state acts alone in exercising the new power. The Virginia-Kentucky compact from which the Ohio River states derive their concurrent jurisdiction, the Mississippi River group of agreements, and the proposed Lake Michigan compact, are examples.

3. Agreements conferring reciprocal privileges beyond state lines. This type includes extradition agreements, agreements permitting the serving of process beyond state lines, and granting to one state police authority within the boundaries of another. This group, like the second group, effects an extension of the state's jurisdiction, either for all purposes or for limited ones, but differs in that instead of providing for concurrent jurisdiction over a certain area, the new power is to be exercised within a given area by one state only. The best example is the New York—New Jersey agreement of 1833.

4. Agreements authorizing or permitting joint construction of interstate works. This type includes agreements for the construction of interstate bridges, the creation of interstate corporations for the development of a harbor, joint chartering of railroads, the joint building of tunnels, etc. The distinctive element of this group is the commitment to engage jointly in some new activity, rather than to fix police jurisdiction. New York has made such agreements with New Jersey and Vermont.

5. Agreements for joint police administration of adjacent areas. Of this class are the agreements for the joint administration of parks lying in two states. New York and New Jersey are parties to one.

6. Reciprocal agreements by states to effect certain action within their separate jurisdictions. Included in this group are the agreements, such as the Kansas City waterworks agreement, to exempt property of the other state from taxation; agreements to preserve conservation laws, such as the Washington-Oregon agreement governing the taking of fish from an interstate stream; agreements to make appropriations for protection of forests, such as congress has proposed, or the building of interstate works; agreements to limit the production of natural resources, and the 16 authorizations for agreements for the allocation of interstate streams. The last is the most recent and the most rapidly growing class.

It will be noted that each state, in entering a compact, has affected its preexisting authority in one or both of two ways:

1. Assumed additional powers; that is, it has acquired authority of some kind beyond the state's boundaries, or,

2. Become obligated to a course of pro-

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cedure within its own boundaries; that is, has incurred a limitation rather than acquired a new power.

With this background, let us turn to the specific proposal for an interstate agreement for the conservation of oil and gas. In general, this proposal calls for an agreement of the second kind, binding the states to carry out certain policies within their own borders but giving none any authority within the boundaries of another.

Four Objectives

Specifically, the interstate agreement contemplated in this discussion would aim at four objectives:

1. The creation of an interstate fact-finding agency. It would make periodical forecasts of the demand for domestic consumption and export, estimate supply, ascertain the quantity of oil producible without waste, and allocate production quotas among the states. This agency, composed of state representatives who might be selected from members of the various state public service commissions, would perform functions of an advisory character, and would have no administrative powers. It would supplement and not supplant the existing state agencies. Its estimates and forecasts once made would be transmitted to the states for their individual enforcement and to federal authorities for action with reference to imports, outlined below. It is contemplated that this interstate agency would be aided by federal participation in some form for the protection of interstate commerce and of the consuming states. That participation might take either the form of membership in the interstate agency, or might be in the form of concurrence in the agency's findings by some federal authority in so far as these findings affect interstate and foreign commerce.

2. A commitment by each state to adjust its production in accordance with the allocation recommended by the joint interstate agency so far as the state constitution will permit. It is contemplated that the state would carry out this commitment under its own laws and by means of its own public service commission. In other words, the compact would adopt the existing machinery for actual enforcement. No state would act beyond its borders, and the enforcement within each state would be an enforcement by its own agencies of the state's own statutes, most of them already tested in the courts.

3. An authorization to the interstate agency to recommend uniform conservation laws, but without a commitment on the part of the states to adopt them. In this respect the interstate agency would be a clearing house for the gradual improvement of conservation legislation. It might perform similar functions in the collection of data on refinery movements to assist in checking tax evasion.

4. Federal regulation of imports to accord with the forecasts of demand. It is contemplated that upon certification by the interstate agency of its estimated demand for the ensuing period of three, six, or nine months, and concurrence by proper federal authority, that the Federal Government would restrict imports for that period to accord with the estimated demand. The method of controlling imports would be provided in the Act of Congress authorizing the compact. There are several methods available. One is a flexible tariff to equalize the delivered cost of imported oil and its products with those of domestic origin. Another is the quota system, under which imports would be limited to some fixed percentage of the estimated national demand.

The above, in brief, are the four principal objectives. It will be noted that this plan is a combination of several of the methods which have been used in other interstate compacts. The basic idea of a limitation enforced by each state separately, but in accord with a common plan, is close to that of the water-allocation compacts of the Western States, notably the Colorado River Compact, whereby each member agrees to limit its appropriations from the common stream, and each enforces the limitation within its borders. The present plan departs from the water compacts, which fix a permanent allocation, by providing instead for the periodical readjustment of the allocation by an interstate agency. Precedent for a permanent joint commission will be found in a number of the New York agreements. Unlike the New York commissions, the one proposed here would have fact-finding and not administrative powers. In that respect it is like those boundary agreements which call for a joint surveying commission. The proposed body, in recommending uniform legislation from time to time, would perform some of the functions of the present commissioners on uniform laws. The states in enacting them would be following the pattern of the compacts for establishing uniform fishery laws.

The net result would be a system insuring the stability of investments through assurance against erratic production swings; it would afford sufficient flexibility to meet changing conditions; it would gradually tend toward uniformity in conservation methods. Above all, it would insure the nation against the premature exhaustion of its oil reserves through the wasteful management of competing flush pools.

In the following paragraphs are considered some of the methods by which interstate agreements may be effected.

Methods of Agreement

There are a number of ways of bringing an interstate compact into being. In general, they can be grouped as the contract method and the reciprocal legislation method.

If the first is to be effected, the steps generally are as follows:

1. An Act of Congress authorizing the negotiation of the compact, and outlining its purposes. These authorizations in the past have generally provided that the compact shall not become effective until ratification by congress; but there are instances in which congress has given its unqualified consent in advance. In the present case it may be possible to authorize some temporary fact-finding agency pending completion of the compact.

2. Authorization by the state legislatures for commissioners, representing the several states, to meet and negotiate a compact, subject to ratification by the states.

3. The actual negotiation and signature of the compact by the various state commissioners.

The compact itself might follow something like the following pattern:

a. A recital of the parties.

b. A clause constituting the joint fact-finding agency, including the fixing of federal participation, and defining the agency's powers.

These, it is assumed, would relate (1) to the determination of demand, allocation of it, and notification to the states; (2) the recommendation of conservation laws; and possibly some additional functions, such as (3) the exchange of information about refinery runs and shipments for assistance in eliminating tax evasion. Its members might be authorized (4) to participate, at federal invitation, in negotiations of international production agreements.

c. A clause pledging each state to adjust its production to its quota, but by means of its own laws and its own local regulatory body.

d. A clause fixing the notice required for withdrawal, for it is not contemplated that any state should be irrevocably bound..

4. Ratification by the state legislatures.

5. Ratification by congress. This might provide, if the authorizing act did not, (a) for the federal relationship to the fact-finding agency, either through participation in its membership or concurrence in its findings by some federal agency, and (b) for the limitation of imports in accord with the estimated demand, and (c) for negotiation of international production agreements, in which negotiations the compacting states might designate their representatives to participate as federal invitees and agents.

If the reciprocal-legislation method is followed, the following is an outline of possible procedure:

1. Authorization for the compact by Act of Congress.

2. Negotiation of its terms by representatives of the states who may or may

not have had antecedent authority from their legislatures.

3. Recommendation by the commissioners of a form of uniform statute for enactment by the several states. This statute would embody, first, an authorization for a representative of the state to act with representatives of other states as a permanent agency to carry out the functions outlined above for the joint interstate agency. Second, a commitment to enforce the allocation recommended by this proposed joint agency. Third, it might outline a model conservation statute for local enforcement. Fourth, a provision making the statute effective upon enactment of an identical or similar statute by a specific number of other states.

4. The enactment of the uniform statute by one, two, three or more states, whereupon the commissioners authorized by the statutes would meet and constitute a permanent joint commission, and would thereafter exercise their fact-finding and advisory powers. The local regulatory body of the state would proceed under the authorization of the same statute to enforce the allocations recommended by the joint interstate body, and would enforce the local conservation laws as prescribed in the uniform statute or contained in other statutes.

To summarize briefly:

This discussion has been concerned with the extension of the existing system of state regulation of the production of oil and gas, to a basis of interstate cooperation. State legislation has resulted from an attempt to eliminate an artificial factor, namely, the impulse toward wasteful production necessitated by our prevailing theories of ownership of oil and gas. The proposed compact would eliminate a second artificial factor, the impulse toward wasteful production by separate pools, occasioned by the abnormally low production costs of wasteful flush fields. The method suggested adopts and utilizes the existing conservation machinery without involving the anti-trust laws nor any constitutional questions as to federal authority. It is proposed, however, to proceed with the cooperation of the Federal Government, evidenced not only in its approval of the compact but in the enforcement of it as affecting importations.

What is proposed here is a method whereby these oil-producing states may collectively exercise their police power in trust for the nation—a nation which is without such police power and which must look to them for the protection of an irreplaceable national asset.

It is not a difficult method. The steps are plain. If there is a will toward a solution, this one can be accomplished in a matter of months. If the proven powers of the state are not an adequate platform on which to build, then let some other basis be proved and a new structure built. But no solution will be accomplished if there is no determination to reach one. The result depends almost entirely on the industry; others can suggest the routes, but the industry must supply the motive power.

MEN IN THE INDUSTRY'S NEWS

(*Continued from page* 18)

KEITH CLEVENGER, for the past three years director of publicity and advertising for the American Gas Association, New York City, has resigned to enter the field of gas merchandising and advertising promotion. In his new capacity he will be associated with the advertising firm of Wilson & Haight, Inc., of Hartford, Connecticut, as a planning, merchandising and advertising consultant, primarily in the promotion of the modern automatic all-gas kitchen merchandising and advertising program for gas utilities, as well as a general consultant on all matters pertaining to gas utility and merchandising matters. Mr. Clevenger's headquarters will be for the time being at his present address, 420 Lexington Avenue, New York City.

Prior to joining the staff of the American Gas Association, in 1929, Mr. Clevenger had been identified with the Henry L. Doherty organization as director of public relations for its oil and gas properties in the Southwest, as well as other gas, electric and telephone utilities affiliations. He brings to his new work a background of more than 20 years of active newspaper, trade association, advertising and public utility acquaintance and experience. Mr. Clevenger was one of the speakers before the annual convention of the American Gas Association, at Atlantic City, this week when he will present for consideration of the industry the "modern, automatic, all-gas kitchen" merchandising and advertising plan.

FRED W. CRAWFORD, of Columbus, Ohio, vice-president of Columbian Gas & Electric Company and president of Panhandle-Eastern Pipe Line Company and Ohio Fuel Supply Company, was a visitor in Oklahoma City during the early part of the week. Mr. Crawford is on an inspection tour of Mid-Continent fields checking properties and familiarizing himself with local conditions.

JOHN ASBURY, scout and land man for Shell Petroleum Corporation with headquarters at Muskegon, Michigan, was a visitor in Fort Worth last week. Asbury formerly scouted in Texas for the old Marland Oil Company.

GEORGE S. BUCHANAN, formerly with the geological department of Standard Oil Company of Kansas, is now chief geologist of Barnsdall Oil Company.

NEAL C. DONOVAN, drilling foreman for Burmah Oil Company in the Masinpur, Assam, district, is spending an extended vacation at Long Beach, California. He has spent more than four years in Burma.

FRANK C. ADAMS, land man for Barnsdall Oil Company, is now working in the Gulf Coast district, having been transferred from Okmulgee, Oklahoma, to the new office established by the company in Houston.

W. A. DUNCAN and Ralph A. Davis, field men for Burmah Oil Company, left Los Angeles October 3 for Burma, following an extended California vacation. Mr. Davis was accompanied by his wife.

W. H. ALLEN, field man with Burmah Oil Company in upper Burma, will leave California October 31 for headquarters abroad. He will be accompanied by Mrs. Allen.

W. W. ROBINSON, formerly chief chemist for The Texas Company of California but now located in New York, recently returned to the East after a visit to Los Angeles.

RICHARD R. CRANDALL, formerly geologist with The Texas Company of California, is now engaged in special geological work near Santa Paula, California.

M. W. GRIMM who has been district geologist in East Texas, Arkansas, Louisiana, Mississippi and Alabama, for Tidal Oil Company, has resigned and opened an office in room 203 Ward Building, Shreveport, as a consulting geologist. He will continue, however, to represent this company in this territory in a consulting capacity. Mr. Grimm is a graduate in geology of the University of Chicago, is a member of the American Association of Petroleum Geologists, a member of the Louisiana Academy of Sciences, and is on the executive committee of the Louisiana-Arkansas division of the Mid-Continent Oil & Gas Association. He is also a past president of the Shreveport Geological Society.

F. P. MONAHAN, until recently in charge of the Tulsa agency of the D. F. Connolly Company, has been named Mid-Continent representative of the Cincinnati Rubber Manufacturing Company.

Advance in Production Practice Reviewed by Institute Program

New York.—The tentative program for the Thirteenth Annual Meeting of the American Petroleum Institute at Houston on November 15, 16 and 17 provides for presentation of at least 40 technical papers before division groups along with three general sessions in which men prominent in industrial and economic affairs will be heard.

Those attending the meeting will have the benefit of a short, intensive course of instruction in the technical and practical problems of producing, refining and marketing petroleum.

Speakers at the general sessions will include Sir John Cadman, of London, chairman of the board of the Anglo-Persian Oil Company, Ltd.; Henry I. Harriman, Boston, president of the Chamber of Commerce of the United States; Peter Molyneaux, Dallas, editor of The Texas Weekly, and authority on economic resources of the Southwest; Amos L. Beaty, president of the Institute; and Charles F. Roeser, Fort Worth, independent oil operator, vice president of the Institute, and chairman of that organization's production division.

While the meeting will not be officially opened until November 15, preliminary activities will begin on Saturday, November 12, when the first two of more than 40 committee meetings will be held.

First General Session

The first general session of the meeting will be held at the Rice Hotel Tuesday morning, when Mr. Beaty will deliver the president's address, and Dr. John W. Frey, Bureau of Foreign and Domestic Commerce, will present results of a study of the economic outlook made for the Federal Oil Conservation Board by a committee of five oil economists headed by him. Another important feature of that initial general session will be presentation of the Institute's economic forecast, covering probable consumption of motor fuels during the six months beginning October 1. The forecast will be presented by Albert J. McIntosh, Standard Oil Company of New York, head of the statistical sub-committee on refinery statistics and economics. That committee will have met in Houston on Saturday for final drafting of its report, on which it has been working in New York, and will have reported to the main committee by Monday.

The second general session will be held Wednesday afternoon at two o'clock and will embrace addresses by Mr. Molyneaux, Mr. Harriman, and Sir John Cadman. Later the same day a third general session will feature a report by Mr. Roeser on the current production situation and there will be presented a special exhibit of the efficient use of water drive and utilization of energy and free gas cap, with working models and motion pictures illustrating the practices.

The Institute's board of directors will meet Monday afternoon and on succeeding days, and its board of councillors will meet Tuesday morning to nominate candidates for election as members of the board of directors. The annual banquet will be held Thursday evening.

Production Division Meetings

In sessions on Tuesday evening, Wednesday morning, Thursday morning, and Thursday afternoon, the division of production will consider such problems as well-spacing, hydrodynamics of reservoir drainage in relation to well-spacing, comparative yields with varying well-spacings, pressure maintenance, free gas control in maximum oil recovery, sub-surface economies in drilling practice, recent developments in drilling technique, deep well completions, and tubing and pumping units.

For the first of the group sessions of the production division, to be held at eight o'clock Tuesday evening, November 15, is scheduled an open meeting of the topical committee on well-spacing, sponsored by the central committee on drilling and production practice, with Fred E. Wood, Standard Oil Company (Indiana), presiding; a paper on "Well Spacing for Water Flood," by K. B. Nowels, Forest Oil Corporation; and another on "Effect of Additional Wells on Ultimate Yield", by J. J. Zorichak, Midwest Refining Company; followed by general discussion from the floor.

The program for the production division's group sessions beginning Wednesday morning at 9:30 o'clock continues Tuesday's consideration of well-spacing, and papers scheduled include the following: "Hydrodynamics of Reservoir Drainage and its Relation to Well Spacing," by H. D. Wilde, Jr., and T. V. Moore, Humble Oil & Refining Company; "Comparative Yields in California Fields with Various Well Spacings," by A. S. Hayes, General Petroleum Corporation of California; and "Well Spacing in the Oklahoma City Field," by Donald R. Knowlton, Phillips Petroleum Company.

Papers scheduled for group sessions of the production division on Thursday morning ,beginning at 9:30 o'clock, will deal with drilling and production practice, being sponsored, like the Tuesday and Wednesday sessions, by the central committee on drilling and production practice, and will be presided over by H. N. Marsh, General Petroleum Corporation of California. Papers scheduled for this session include the following: "Importance of Free-Gas Control in Maximum Oil Recovery," by J. R. McWilliams, Skelly Oil Company; "Practical Benefits of Pressure Maintenance Demonstrated by Institute Research," by William N. Lacey, California Institute of Technology; and "Pressure Maintenance in East Texas," by John A. Ritter, Sun Oil Company. A report of the division's nominating committee will be made in the Thursday morning session by Dana H. Kelsey, Sinclair Prairie Oil Company, followed by election of 20 members of the general committee of the division of production.

On Thursday afternoon, beginning at two o'clock, consideration of drilling and production practice will be continued in the production division group sessions, with W. W. Scott, Humble Oil & Refining Company, presiding. Five papers are scheduled for this meeting, as follows: "Tapered Tubing," by John T. Hayward, Barnsdall Oil Company; "Selection and Rating of Pumping Units," by Bowman Thomas, Humble Oil & Refining Company; "Sub-Surface Economies in Drilling Practice," by Bruce Barkis, Rio Grande Oil Company, with Ralph D. Copley, Standard Oil Company of California, cooperating; "Recent Developments in Drilling Technique and Practice," by K. A. Covell, Indian Territory Illuminating Oil Company; and "Deep Well Completion Practice in Reagan County, Texas," by E. V. Foran, consulting engineer.

Aside from the general sessions and the group sessions of the production, refining, and marketing divisions, there will be numerous committee meetings, for which a schedule has been prepared, extending from Saturday through Thursday.

Humble Storage Tariff Gets Rail Commission Hearing

Austin, Texas.—Humble Pipe Line Company is to be given a hearing before the Texas Railroad Commission here October 26 to determine the legality of a tariff of two cents per barrel monthly for storing crude oil now being imposed by the company on 40 per cent of crude accepted from outside operators and also from royalty interests under producing properties of Humble Oil & Refining Company in East Texas, Panhandle, North and West Central Texas.

In addition to asking for an approval of the monthly storage rate, Humble Pipe Line Company proposes that storage charges are payable monthly not later than the fifteenth day of the month succeeding the month during which the service is rendered. If the storage charge remains unpaid for a period in excess of 90 days from date oil is received for storage, and/or from date such charges may accrue the company may by any agent sell said crude at public auction for cash at the principal office of the company at Houston after publication for five successive days of notice in a newspaper published in said city of the time and place of sale and quantity to be sold.

The petition filed by Humble Pipe Line Company specifies that it may be a bidder and purchaser at such sale. Proceeds derived from said sale the company may pay itself all lawful charges, then the balance shall be held for whomsoever may be lawfully entitled thereto.

New El Paso Refinery to Run West Texas Crude

El Paso, Texas.—Contracts have been awarded by C. M. McNutt of Longview, Texas, and Emil Gueppelt, Dallas construction engineer, for the erection of a 1500-barrel daily capacity oil refinery at El Paso. The plant will operate on West Texas crudes.

Mid-Kansas Not Expected to Further Protest Proration

Fort Worth, Texas.—The scheduled 10,000-barrel reduction in the daily output of the Yates field effective October 15 as part of a state-wide curtailment movement ordered by the Texas Railroad Commission is expected to be accepted without protest by Mid-Kansas Oil & Gas Company, owner of about 50 per cent of the production in the above field. This company successfully prevented the field's output from being lowered from 65,000 to 58,500 barrels on September 16 in an order issued by the commission September 12 through a temporary injunction obtained against the commission in federal court at Austin on September 14. This restraining order does not apply to the commission's new order, and the above company has not indicated that it will seek a renewal from the court.

Assuming that the 10-cent price increase already promised most Mid-Continent areas by a large number of buyers will soon reach the Yates field, Mid-Kansas Oil & Gas Company would sustain a net loss of only about $500 per day in operating its Yates properties on a reduced allowable but with a 75-cent price in effect. To offset this loss the company stands a good chance to find a market for about 5000 barrels of its current daily production in the East Texas field that has been going to storage pending a spot sale, or exchange with other majors for a like amount of Oklahoma crude. The general production curtailment program is expected to result in a steady market becoming available for this company's East Texas crude from 220 completed wells.

Should Mid-Kansas Oil & Gas Company, which probably resented the previous attempt to cut Yates production because of the commission having hiked the well allowable in East Texas field from 43 to 50 barrels on September 1, again resort to the court in resisting a reduction of the output of the Yates field there would be immediate danger of a collapse of the new state-wide curtailment program.

Big Lake May Regain Deep Production Record

San Angelo, Texas.—The Big Lake field may regain its production depth record that was surrendered last year to California through the deepening of the Big Lake Oil Company's University 1-C, which is installing rotary to deepen from 8908 feet after declining to a small oil and gas yield. This well has produced about 900,000 barrels of high gravity oil, but was damaged by water encroachment. The prolific oil and gas flow was not restored when the well was plugged back to 8715 feet because of water. The field has one well bottomed at 9020 feet, but it is planned to go below this level with 1-C to explore the lower section of the Ordovician lime.

Boyd Is Witness in Texas Anti-Trust Ouster Suit

Austin, Texas.—When the taking of testimony from W. R. Boyd, Jr., executive vice president of the American Petroleum Institute, began at Austin, October 14, C. I. Francis attorney for the Institute stated that he would introduce 7000 letters and documents in 200 exhibits. If the commissioner fails to allow introduction of these documents the attorney announced that he later will ask that they be viewed in the trial of the case. Letters and documents introduced for identification by Mr. Boyd Friday concerned the organization of the National Code of Practices for the Marketing of Refined Petroleum Products. The Texas attorney general contends that through this code that the major oil companies gained a monopoly of retail outlets.

Although the suit through which the state seeks to collect fines of more than $17,000,000 and the cancellation of the charters of 15 oil concerns is against the oil companies primarily the A.P.I. has been made a defendant because of the code.

The A.P.I. executive took the witness stand October 13 and outlined the financial set-up of the organization. He said its funds came through dues from members and from donations to various funds of the organization. His testimony revealed that the Institute now has 3485 members, who pay $10 per year dues. Donations to date for this year have been $234,000. In 1928 donations amounted to $499,000.

Much of the first days of the taking of testimony was given over to clashes between attorneys. Judge R. L. Batts, attorney for Gulf Refining Company, objected to the testimony of Mr. Boyd on the ground that the law under which he was called into Texas is unconstitutional in that it does not permit the defendants to call witnesses from outside the state.

The attorney general sought information as to the amounts contributed by the major companies to the Institute. Mr. Boyd said he did not know the amount by specific years but could read from a schedule prepared by the attorney general, which seemed to be correct. The attorney general declined to introduce the entire schedule. Apparently the official was seeking to show that the A.P.I. depends on contributions from major companies exclusively.

He asked for details on the method by which allotments are made for contributions. Mr. Boyd explained that this was on the basis of a formula which in turn bears a relation to net worth and net earnings of the corporation.

CALIFORNIA FIELDS

Middle Dome at Kettleman Hills in Questionable Status; Lost Hills Will Have Co-operative Deep Test.

BRAD MILLS, *Staff Representative, Los Angeles, California*

Cooperative Deep Test Planned for Lost Hills

Bakersfield, Calif.—Associated Oil Company and Richfield Oil Company, with the aid of three or four smaller companies, are considering a deep test in the Lost Hills field, but an exact location has not been made. It is understood that Richfield Oil Company, now in receivership, has obtained permission to spend up to $200,000 on the venture, but no official announcement has been made to this effect. A leading gas company has agreed to furnish gas for fuel, while Universal Consolidated Oil Company may furnish the water. Continental Oil Company and Ohio Oil Company are considering the agreement and may participate on a percentage basis. A joint test should prove as conclusive for several companies as three or four wells on widely separated leases. Several deep wells have been drilled, but major operators have not been satisfied with results. The Lost Hills field lies roughly in line with the South Dome of Kettleman Hills, but this fact may not increase the value of the deep zones. High pressure water zones are found below the shallow producing zone, and the few deep wells have been drilled with much difficulty.

No Completion Rush in View for Kettleman Hills

Coalinga, Calif.—Operations on the North Dome at Kettleman Hills have settled to include little of a spectacular nature. Drilling of important outpost tests will help to define the field, but showings in these wells do not point to a large production beyond the average limit established some time ago.

Kettleman North Dome Association is coring a hard gray sand below 9225 feet in No. 36-30J, an edge test which is not showing much promise in the intermediate and lower Temblor formation. This well was tested around 9000 feet but failed to produce below the 9⅝-inch shutoff at 8450 feet. Deepening offered another chance at production, but the cores from below 9000 feet show only slight cuts.

North Kettleman Oil & Gas Company should soon reach a critical depth in Lillis-Welch 1, flank test on the extreme northwest extension of the North Dome. Cores from around 9100 feet are showing no cut, but the coarse gray sand does not seem to contain water. Cuts were obtained from cores taken from around 9010 feet in the variegated shale. A completion at this point would extend the field nearly two miles and would place an entirely new value upon the northwest flank.

Three or four completions should be expected during the fall months, but no flood of new oil is possible under the present drilling schedule. Kettleman North Dome Association, Union Oil Company, Petroleum Securities Company and Standard Oil Company should each complete at least one well during the next two months. Completions are not attended with the publicity and interest common to the early producers.

The Middle Dome has temporarily passed into a very cloudy status, and it may require a considerable time to determine the potential value of this part of the field. Standard Oil Company is still trying to place No. 6-29V in condition for another production test at some point below 8000 feet. This well was drilled to 8406 feet, but a difficult fishing job developed below 6000 feet. Wells being drilled by Universal Consolidated Oil Company and Petroleum Securities Company have been shut down. The former's Bunting 1 was drilled to 5955 feet, while the latter's Burbank 1 appears hopelessly tied up with a fishing job around 5100 feet, after drilling to 9332 feet and plugging back to 9212 feet for a production test.

Potrero Tricky Formations Baffle Development

Los Angeles.—Recent abandonment of two or three wells in the Potrero field further emphasizes the difficulty of obtaining a satisfactory production in an area which has a very questionable record. Cross faulting, tilting formations and a general tricky condition have baffled operators for several years. Abandonment of Wilshire Oil Company's Neace 1 at 7177 feet places a very doubtful value upon the deep zones in the townlot district. This well was deepened from 5328 feet and was originally drilled by George F. Getty, Inc.

The larger leases toward the southeast seem to offer little more promise than the smaller townlot tracts nearly a mile to the northwest. The discovery well was completed on one of these large leases, but subsequent drilling failed to develop a uniform production. Wilshire Annex Oil Company was one of the latest entries into the field, and succeeded in completing two good producers on the Country Club tract. The original producer was affected by drilling of a second well, and may be abandoned. The third well developed mechanical difficulties and may also be abandoned. The cut increased in most producers on the large leases toward the southeast, while shutoffs were not obtained at all in some of the first wells. Efforts to strike the correct point with reference to the fault have been partially successful, but producers show increasing amounts of water.

Ventura Well Has Long Strings of Big Pipe

Ventura, Calif.—The longest string of 11¾-inch casing ever run in the Ventura Avenue field was successfully cemented at 7024 feet in Associated Oil Company's Lloyd 131, a deep test which was spudded February 27, 1932. A string of 16-inch casing was cemented at 4209 feet and a 15-inch hole was drilled from 4220 to 7024 feet.

General Petroleum Corporation's Barnard 15A will prove an interesting test of the very deep producing formations in the field. This well is located on about the same contour line as the discovery well, but field conditions may not prove the same. The finest equipment obtainable was purchased for drilling Barnard 15A and the outcome of the test should help to define the trend of the deepest zone.

The deep zones at Ventura Avenue hold great possibilities and will be developed as demands justify such expensive operations. One of the most unusual features of development in this field is that all wells start and stop in the Pliocene. The Ventura valley has the thickest known Pliocene deposits, but the Miocene should be reached a short distance below 10,000 feet. The deepest producing well was finished at 9710 feet by Associated Oil Company.

Search for Gas Production In California Considered

Los Angeles.—Development of wildcat districts which offer some promise of natural gas is beginning to claim the attention of a few operators who see gas as a probable means of additional revenue in the future. California is almost void of natural gas fields, being forced to meet its supply from the oil fields. Need for a steadier supply of gas for the leading cities has prompted leasing of lands not formerly regarded as promising for production of oil. Southern California offers

little opportunity for operators who would like to develop a supply of straight natural gas. Several northern California districts have produced a limited amount of gas without oil, but very few commercial fields have been found. Most of the small fields are producing from formations which are not too steady, and major operators are not anxious to operate where insecure shale or marsh beds are the chief source of supply. Both Los Angles and San Francisco would welcome an additional gas supply, despite the present ability of leading oil fields to supply all needs. Scattered drilling in several northern counties has not resulted in important discoveries. Major operators have been content to let smaller operators search for natural gas, but in a few of the more promising districts they have acquired acreage near drilling wells.

North Belridge Well Shows 2,000 Barrels on Test

Bakersfield, Calif.—Belridge Oil Company's No. 27-35, Temblor producer in the North Belridge field, established a potential of 2000 barrels from 5490 feet before being cut back to meet curtailment requirements. This well was completed in the upper portion of the formation and is flowing from about the same level as the six other producers.

Ohio Oil Company is drilling below 6900 feet in Bloemer 1, a flank test which failed to produce in the upper Temblor. This well will be drilled to test the 8000-foot formation which produced both gas and oil for Belridge Oil Company in No. 64-27. Continental Oil Company is drilling below 4500 feet in Result 3, but this well may not be drilled to the very deep producing zone.

Buttonwillow Gas Well Develops Good Pressure

Bakersfield, Calif.—A spectacular blowout was staged by General Petroleum Corporation's Morris 2, shallow gas well in the Buttonwillow field which was drilled to 2283 feet for a test of the shallow producing zone. After cementing the 8⅝-inch casing at 2277 feet, a test of the water shutoff was being made. While pulling the drill pipe from the hole, the well suddenly came in and destroyed the derrick after blowing several stands of drill pipe from the hole. The well is out of control, but killing and completing should be accomplished this week. Morris 2 was to have been completed in the very shallow gas producing zone which has accounted for several good wells during the past year. The blowout does not hold a special significance, but it demonstrates a pressure necessary for sending the gas to market.

Milham Exploration Company and General Petroleum Corporation are the principal operators in the Buttonwillow gas field. The former has developed a large production, but has been content to shut in all completions to await actual demands.

Coal Oil Point Wildcat Going Deeper for Test

Santa Barbara, Calif.—Bolsa Chica Oil Corporation has deepened Permit 191-1A, an important wildcat test off Coal Oil Point, to 4090 feet and will continue the production test below the 6⅝-inch shutoff at 3960 feet. The well was redrilled and deepened from 4031 feet, the depth from which a recent production test failed. The formation was largely gray sand, but cores from below 4060 feet showed fair cuts. The liner was run to bottom for another test and the entire upper portion of the Vaqueros will be included. Absence of water strata was a favorable development. Redrilling of this well from around 500 feet was accomplished with little trouble, but proximity of the new hole to the original one may hinder the present test. There is reason to believe that the top of the Vaqueros was damaged some over a small area through damage to the first well near the show of the shutoff string around 4000 feet.

California Field Developments

Completions

Company, Well and Location	Initial Production Bbls.	Depth
KINGS COUNTY—		
Welport Oil Co., Avenal 1, 9-24-17	*	3940
LONG BEACH—		
R. R. Bush Oil Co., Graham 4....	75	4750
The Texas Co., Daly-Gerard 1	60	5485
MERCED COUNTY—		
Le Grand Synd., No. 1, 4-9-17....	*	3126
NORTH BELRIDGE—		
Belridge Oil Co., No. 27-35, 35-27-20	2000	5490

New Operations

FRUITVALE—Harrison Oil Synd., No. 1, 23-29-27.

LOS ANGELES COUNTY — Sanbar Pet. Co., No. 1, 35-5-16.

MESA—Pacific Gulf Oil Inc., No. 2, 28-4-27.

RINCON—Indian Pet. Corp., Shudde 2, 7-3-24.

SANTA PAULA—Hardison and Temple, No. 1, 22-4-21.

NORTHERN CALIFORNIA
Wildcat Drilling Report
(Wells shut down not included)

KERN COUNTY

BUTTONWILLOW — General Pet. Corp., Morris 2, 6-28-23, testing water shutoff, will make production test below 2283 ft. Milham Exploration Co.'s Page 1, 6-28-23, pulling 9-in cas, td 3221 ft, plugged to 2750 ft; Whitaker 2, 8-28-23, rigging rotary.

DEVIL'S DEN—A. S. Halloway's Lincoln 1, 11-25-18, will deepen from 675 ft. Tom Hannah's No. 1, 25-28-18, ur 3455 ft.

McKITTRICK—Ozena Oil Co.'s No. 2, 27-29-21, dr shale 2965 ft. Welport Oil Co.'s No. 2, 19-29-21, repairing rig, will deepen from 615 ft.

WEED PATCH—Hay Pet. Corp.'s No. 1, 22-30-29, new lcn.

SANTA BARBARA COUNTY

CARPENTERIA — Casitas Oil Co.'s State 202-2, dr 500 ft.

COAL OIL POINT—Bolsa Chica Oil Corp.'s State 191-1A, showed water, gas and trace of oil on production test at 4026 feet, deepened to 4046 ft, will test again.

CUYAMA—Cebrien and Perkins' No. 1, 27-10-26, lcn.

LOMPOC—O. C. Field Gasoline Corp.'s McLean 1, 6-7-33, testing water shutoff 2555 ft. W. M. Lee's No. 1, 28-8-34, material at lcn.

ORELLA—Oakburn Oil Co.'s State 169-1, cmt at 2821 ft, may make production test.

SANTA MARIA — Superior's Fugler Core Hole 1, sp; Santa Maria 1, abn 830 ft.

SANTA ROSA ISLAND—Standard's Island 1, running 13⅜-inch cas to 3700 ft to protect hole, td 3734 ft.

VENTURA COUNTY

CONEJO—American Oil Co.'s Powell 1, 33-2-20, dr hard rock 2114 ft.

FILLMORE—Superior's Leavins 1, 23-4-19, lcn.

HOPPER CANYON—Commander Oil Co.'s No. 1, 13-4-19, will deepen from 1820 ft. Bardeen Pet. Co.'s Lankershim 2B, 13-4-19, redrilling 2155 ft.

LAS POSAS—Las Posas Pet. Co.'s Mahan 1, 22-3-20, lcn.

OJAI—Livermore and Kennedy's No. 21, 33-4-23, dr shale 400 ft. G. L. Strobeck's No. 1, 34-4-23, sp.

RINCON—Woodrow Pet. Corp.'s Woodrow 1, 4-3-24, dr shale 5015 ft.

SAN MIGUELITO — Honolulu Consolidated Oil Co.'s Valenzuela 1, 23-3-24, lcn.

SANTA PAULA — Hardison and Temple's O'Hara 1, 22-4-21, dr shale 300 ft. E. M. Lesperance's Boosey 1, 31-4-20, rigging cable tools. J. W. Mosher's No. 1, 22-4-21, fsh for cable tools 600 ft.

SESPE—Harmon and Deal's No. 1, 33-5-19, dr shale 1065 ft. H. A. Iver's Star 7, 1-4-20, dr hard shale 200 ft.

SIMI—C. and H. Anderson's Marr 11, 36-3-18, co 1875 ft, pumps oil and water.

SULPHUR MOUNTAIN — Wilshire Oil Co.'s Thompson 1, 20-4-21, changing to cable tools, td 300 ft.

TIMBER CANYON—Petro Well Producing Co.'s No. 4, 18-4-20, dr shale 1355 ft. Superior Oil Co.'s West 3, 13-4-21, dr shale 4900 ft.

MISCELLANEOUS

KINGS COUNTY—Kettleman Reef Ridge Oil Co.'s Seymour 2, 10-23-16, rig. Knudsen and Schmidt's Avenal 1, 36-23-17, co 5765 ft, will rerun part of 6⅝-inch cas. Dudley Dome Oil Co.'s No. 1, 9-23-39, dr gray sand 715 ft. Triune Oil and Gas Co.'s No. 1, 5-23-20, co 1115 ft. Glen Woodward's No. 1, 32-22-20, dr out cmt 775 ft.

MERCED COUNTY—Harry Bergman's Ora Loma, 12-12-11, lcn. Los Banos Pet. Co.'s No. 1, 26-10-9, rig.

SAN LUIS OBISPO COUNTY—Kent and McDonald's No. 1, 3-32-22, dr 3000 ft. Shell's Mahoney 1, 4-25-12, coring shale 2515 ft.

SOUTHERN CALIFORNIA

EL MONTE—Hutcheson and Andrus' No. 1, 11-1-11, rigging rotary.

LYNWOOD—William L. Jones' Graham 1, 31-2-12, dr shale 3350 ft.

MONTEBELLO — Allen W. McNiel's McNiel 1, 7-2-11, rig.

NEWHALL—W. T. Ball's Newhall 1, 34-3-16, sd 3582 ft. Sanbar Pet. Corp.'s Walker 1, 35-5-16, dr shale 700 ft. Security Trust Dev. Co.'s No. 1, 31-5-14, dr shale 200 ft. Superba Pet. Corp.'s Newhall 1, 11-3-16, dr shale 235 ft.

OCEAN PARK—Hines Pet. Corp.'s Happy Days 1, 8-2-15, making production test 7409 ft after getting water shutoff and reperforating cas.

PALMS—Palm Ridge Oil Co.'s Palms 1, 2-2-15, dr shale 1528 ft.

PLAYA DEL REY—Cooperative Dev. Co.'s Mesmer 1, 26-2-15, dr shale 5300 ft. Del Rey Hills Oil Corp.'s U. C. S. 1, 26-2-15, rig.

SAN JUAN CAPISTRANO—Mineral Exploration Co.'s Echinique 1, 8-8-7, dr shale 3715 ft.

SAN BERNADINO COUNTY — Great American Pet. Co.'s Gapco 1, 18-2-8, rig.

OKLAHOMA FIELDS

Court Order Starts Offset Resumption in Roxana Pool. Oklahoma City Overproduction Increased in September.

FLOYD SWINDELL, *Staff Representative, Tulsa, Oklahoma*

Two New Locations Made In Logan County Area

Perry, Oklahoma.—Work is under way on one location and a second has been announced in the new Wentz pool in southwestern Noble County following two weeks of trading during which time Wentz et al's Community-Wolff 1, CSE NW Section 17-20-2w, discovery well, has been shut in for connections. The test was opened Monday, October 10 and during the first hour put 196 barrels of oil in the tanks. Wednesday morning operators started taking a 10-day test, gauging 1718 barrels during the first 24 hours. The well flows steadily for about 35 minutes out of each hour and is reported to be making between 2½ and three million cubic feet of gas. Total depth is still 5197 feet in what is reported second Wilcox sand. However, during the past two weeks some disagreement has arisen regarding correlation of this sand. Some geologists believe it to be a sandy streak in the green shale and say that true Wilcox will not be encountered above 5225 feet. When the 10-day test is completed it is more than likely that the well will be drilled deeper.

Top leasing, trading leases for royalty and what not were responsible for the two locations. Magnolia Petroleum Company has perfected a drilling agreement in SW Section 6-20n-2w, approximately 1½ miles northwest of the discovery well. Through a top lease the N½ SW and SE SW were assigned to J. E. Mabee and Oils Incorporated, Magnolia Petroleum Company retaining the SW SW SW. Lacy Rollins has announced location and is digging cellar and pits for Franks 1, CSE SE SW Section 6-20n-2w, arranged under the drilling deal. A second drilling deal was perfected when Magnolia Petroleum Company was top leased NW Section 33-20-2w, more than 2½ miles southeast of the discovery well. Under the agreement Stanolind Oil & Gas Company acquires S½ NW and NE NW, Magnolia Petroleum retaining the northwest 40 acres of the quarter section. Stanolind Oil & Gas Company has announced location for Kolb 1, CNE NW Section 33-20-2w. It is understood that Champlin Refining Company "Topped" Magnolia Petroleum Company on this tract and has been given some kind of an override to quiet title. One lease would have expired next month and the other early in 1933. Royalty and lease prices have declined to some extent since the Wentz test first found oil but many of the brokers are holding and waiting for the test to be drilled deeper.

City Pool Overproduction Increased in September

Oklahoma City.—Net overproduction in the Oklahoma City pool increased from 408,159 barrels, as of September 1, 1932, to 561,183 barrels as of October 1, according to figures presented in a recent report from the military proration office. While this increase of 153,024 barrels was being developed underproduction dropped from 569,086 barrels on the former date, to 449,886 barrels on the latter. Of the total overproduction of 1,011,069 barrels, as of October 1, six companies have 886,510 barrels, the remaining 124,559 barrels being generally distributed among most of the other operators.

The report shows that 15 companies had no pipe line runs during September due to failure to secure connections or because of being shut in for violation of proration orders. Lease stocks for September declined from 767,616 barrels to 680,784 barrels but working stocks went up from 31,981 barrels to 109,202 barrels, making total stocks at the end of the month 789,986 barrels, compared with 799,597 barrels at the beginning. Total adjusted potential of the field as of October 1 is shown as 4,275,660.79 barrels from 933 completed wells.

Early Show Down Expected In Wilcox Controversy

Oklahoma City.—Failure of the Oklahoma Supreme Court to vacate its supersedeas order granted several weeks ago to Wilcox Oil & Gas Company brings the issue to a head and a show-down is expected within the near future. As it now stands the Wilcox Oil & Gas Company has posted a $5000 bond under which it has attempted reopening 10 wells shut in by order of the military forces and of the Oklahoma Corporation Commission. Following issuance of the bond, the company tried reopening several of its wells only to be stopped by the military proration authorities, who resorted to force in carrying out its orders. Proration attorneys then appealed to the court to vacate the bond, which that body refused to do during the past week. Commenting on the situation, Governor William H. Murray said, "The company's own reports to the state showed it overproduced 1,941,288 barrels between November 1, 1931, and August 1, 1932. It shows the production of all leases at 2,956,777 barrels, while the allowable for the leases was 1,015,489 barrels."

Asked if he would defy the court in event an attempt is made to enforce the supersedeas order, the governor stated he would "cross that bridge when I reach it. It would be a question of whether the court would enforce the law or whether the governor would enforce the law. The court overlooked a bet in the case. My order is under the general order of the commission, while the supersedeas action was brought on the order relating to the Wilcox case. The commission made a general order that there should be no production and no waste beyond the allowable. The shut-in doesn't violate that. This supersedeas action came on the order relating only to the Wilcox company." It will be of interest to observe the next move since the supreme court says that Wilcox Oil & Gas Company may produce its wells under the bond while the corporation commission, backed by the military forces, says that the wells must remain closed until overproduction is made up.

Roxana Pool Deepening Resumed After Truce

Tulsa.—Through an order of the court a drilling truce reached in August of this year among operators in the old Roxana pool in Logan County, will be terminated and a considerable amount of deepening of old wells probably will be in progress within a short time. Late in July, Shell Petroleum Corporation successfully deepened McCully 6, CNE SW SE Section 30-19n-4w, an old Wilcox sand well. Carried deeper the well encountered production in what is thought to be the School Land sand of the Oklahoma City section, making 1100 barrels on its best gauge from 6169 to 6173 feet, the total depth. Immediately owners of offset properties announced intention to deepen. Through an agreement among the operators this action was forestalled and on August 5 McCully 6 was shut in.

Cosden Oil Company, now in federal receivership, has been ordered to deepen Gardner 1, CNE NW Section 31-19n-4w, two locations south and slightly over two west of McCully 6. As a result L. H. Wentz Oil Company has moved in tools

and will deepen Williams 4, NW NW NE Section 31-19n-4w, two locations south and one west of McCully 6. This move will cause reopening of the discovery well but every effort will be made to hold the area in through rigid proration. Importance of the find has not been determined due to a very small amount of penetration into the sand and tests on McCully 6 were not conclusive. The School Land sand in the Oklahoma City type section varies from 0 to 40 feet in thickness and is usually encountered at from 100 to 300 feet above the Arbuckle limestone. Between it and the limestone lies the Johnson sand which is now thought to be causing most of the water difficulty in the Oklahoma City pool.

Oklahoma Field Developments

Completions

Company, Well and Location	Initial Production Bbls.	Depth
CREEK COUNTY—		
Gene Colvin, Greenwood 1-A, sw c nw ne 4-14-10e	14	3285
Jenkins et al, Miley 1, sw c nw 28-14-10e	*	3364
Darger et al, Fulkerson 8, sw sw nw 5-17-7e (owdd)	7	2280
Whitten and Wilcox, Harris 1-A, nw sw ne 12-17-10e	*	2455
Swift et al, Nanace 1, swc ne 1-18-8e	25	2428
R. B. M. Oil Company, Smith 1, nwc se sw 26-18-9e	¶¼	2202
Dean et al, Bible 2, nwc se sw 20-19-9e (owdd)	12	2377
Gled Oil Company, Bible 9, nwc sw se 20-19-9e	10	2213
S. W. Anthony, Muskogee 1, ne c 9-16-12	¶2	1891
Superior Oil Corp., Sanger 1, se se 9-19-10e	*	2473
HUGHES COUNTY—		
H. B. Gentner, Holmes 1, swc 11-7-8e	45	1200
MUSKOGEE COUNTY—		
J. L. Foltz, Bemo 2, ne c sw 8-15-18e	50	1642
Finefield, Rentie 2, sw ne nw 9-15-18e	*	1432
Mack Drlg. Co., Barnett 2, sw sw ne 34-16-15e	¶¼	1106
W. B. Pine, Barnett 1, se c sw ne 34-16-15e	¶1½	1155
OKFUSKEE COUNTY—		
Schock and Phillips, Autry 1, swc se 25-10-11e (owdd)	38	3944
OKLAHOMA COUNTY—		
Verser, Strauch-Burnett 1, sw ne se 15-11-3w	*	265
I.T.I.O. Little 4, se c ne 27-11-3w	4 hrs 728	6625
OSAGE COUNTY—		
Magnolia Petroleum Co. 5, se sw sw 28-26-6e (owdd)	26½	2970
PAWNEE COUNTY—		
Klintworth et al, Fee 1, se ne se 29-20-8e	*	2181
POTTAWATOMIE COUNTY—		
Gypsy et al, Masters 1, swc ne 25-6-5e	644	.....
Mid-Continent Petroleum Corp., Schrader 1, nwc ne 6-6-5e	234	2852
SEMINOLE COUNTY—		
Producers & Refiners Corp., Jefferson 2, nwc se 19-9-6e (owdd)	25	4156
Amerada Pet. Corp. and Stanolind O&G Chase 6, ne c se sw 29-9-6e	1742	4117
WAGONER COUNTY—		
Ault et al, Porter 1, ne nw ne 7-15-17e	¶1	1092
A. T. Pear, Jacob 1, ne c sw 7-15-17e	*	1520
Metzger and Foltz, Wilson 1, cne sw ne 30-17-17e	15	1328
WAGONER COUNTY—		
J. E. Martin, Lovett 1-A, nec nw 35-18-15e	*	1041
J. P. Flanagan, Smith 1, swc 36-18-15e	36	978

New Operations

CREEK COUNTY—H. E. Dowd, Miller 1-A, nwc sw se 32-18-11e.

HUGHES COUNTY—Nash, Redwine 1, swc se 15-5-11e; Fleetborn Oil Co., Foster 1, nwc sw 14-7-8e.

MUSKOGEE COUNTY—W. B. Pine, Barnett 1, swc nw 35-16-15e; Ohio Osage, Beams 6, cel nw nw 19-14-16e (owdd); J. P. Flanagan, Bemo 2, nw sw nw 9-15-18e (owdd).

OKMULGEE COUNTY—Babcock, Harris 4, se c sw nw 1-14-14e.

OSAGE COUNTY—Central Pet. Co. 21, se ne se 16-21-9e.

PONTOTOC COUNTY — Stanolind O&G, Roberts 1, nw c ne 32-5-5e (owdd); Stanolind, Roberts 4, nwc sw ne 32-5-5e.

SEMINOLE COUNTY — Gypsy, Willie 1, nwc sw ne 24-7-6e (owdd).

TULSA COUNTY—McFadden, Bunger 1-A, cel se ne 28-17-13e; Short et al, Company 2-A, se c nw sw 32-19-12e.

WAGONER COUNTY — Metzger & Foltz, Wilson 8, se sw nw 30-17-17e; LaPierre, McIntosh 1, cwl sw sw 13-18-15e; Owens et al, Lincoln 1-A, nw sw 18-18-15e.

Wildcat Drilling Report

(Wells shut down not included)

KAY COUNTY — Blugaugh et al, Makeswater 1, cnw ne 30-25-1e, Compl 5¼ million gas; td 2569 ft.

NOBLE COUNTY—Wentz Oil Corp., et al, Wolff 1, cse nw 17-20-2w, td 5197 ft 2050 bbls in 29 hours.

CREEK COUNTY—O. O. Owens, Fee 1, nwc 23-15-7e, dr 550 ft.

OKLAHOMA COUNTY—Carter Oil Co., et al, Community-Shawbell 24, csw ne 1-12-4w, bldg rig.

LINCOLN COUNTY—Sovereign et al, Flowers 1, sw se se 14-12-3e, dr 4175 ft.

WASHITA COUNTY—Miley Pet., Wolf 1, ne sw 23-9-17w, spd and sd.

SEMINOLE COUNTY—Donley et al, Shepard 1-B, sd 1120 ft.

KIOWA COUNTY—Christian, James 1, ne se 8-6-18w, sd 1610 ft.

PONTOTOC COUNTY — Blackwell O&G, Abbott 1, nw sw ne 14-4-6e, td 930 ft; ur 10-in; Sunray, Grant 1, cse ne 11-4-8e, sand 2562-70 ft hfw; sd for orders.

GRADY COUNTY — English Dlrg. Co., Heenan-Coe 1, ne se ne 32-3n-7w, rng 2-in tubing; est 40 bbls per day.

PONTOTOC COUNTY—Williams, Kroth 1, ne se 33-3-4e, td 880 ft; rng 10-in.

COAL COUNTY — Fink & Russell, Miller 1-A, se ne 10-2n-8e (owdd) td 2630 ft 5-in parted; sd; Dodd & Burton, Grigsby 1-A, nw se ne 35-1n-8e, rig.

ATOKA COUNTY — Barton et al, Miller 2-A, ne nw se sw 26-1n-14e, sd 165 ft; Hicks et al, Morris 2, se ne nw se 5-1n-15e, shot 80 qts, 165-185 ft; co 210 ft; td 215 ft.; George, Reddin 1, sw ne sw 19-1n-15e, dr 330 ft.

BRYAN COUNTY—C. A. Hannel, White 1, nw ne nw 28-6s-8e, set 5-in 1517 ft; sd 1542 ft.

MARSHALL COUNTY—Thomas et al, Setliff 1 sw se se sw 36-5s-7e spd and sd.

STEPHENS COUNTY—California Prod. & Oper., L. Florence 1-A, ne nw se 11-3s-6w, sd 331 ft; California Prod. & Oper. Garrett 1, se ne se 11-3s-6w, sd 290 ft; California Prod. & Oper. Sitton 1, ne se sw 12-3s-6w, rig.

ATOKA COUNTY—Brookshire et al, Guinn 1, nwc 18-3s-10e, top Simpson 2805 ft; dr 2900 ft.

STEPHENS COUNTY—Gillette Bros., Colley 1-A, nw se nw 17-2s-8w, spudding.

ATOKA COUNTY — Malernee et al, DKO Land Co., 1, ce¼ se 35-2s-13e, sd 704 ft; est 3 bbls; Malernee et al, DKO Land Co., 2, cse se 35-2s-13e, rust.

THIRD EDITION of the Well Known Book . . .

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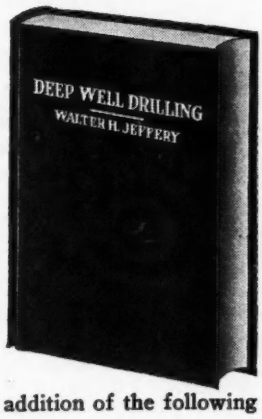
by WALTER H. JEFFERY



Re-written and revised to date, and enlarged by the addition of the following New Chapters:

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KANSAS FIELDS

Believe Wentz Well Not Wilcox Producer; New Hunton Lime Well Making 60 Barrels Hour by Heads; 10 Per Cent Reduction Asked.

FLOYD SWINDELL, *Staff Representative, Tulsa, Oklahoma*

Wentz Well Makes 1126 Barrels; Going Deeper

Tulsa, Okla., Oct. 14.—Wentz et al's Wolff 1, CSE NW Section 17-20n-2w, discovery well in the new Wentz pool, gauged 1126 barrels in the 24 hours ending 7 a.m. October 14, having declined from 1718 barrels on its initial 24 hours.

General opinion seems to be that the test is in a sand within the green shale rather than in lower Wilcox sand. At the expiration of its 10-day test, and possibly before, it will be drilled deeper to the sand which is expected at around 5200 feet.

Sovereign Oil Company's Flowers 1, SW SE SE Section 14-12n-3e, cored sand apparently yielding a small showing of oil at 4616 to 4632 feet. The sand was at first correlated as Bartlesville, but later reported to be Tucker. The well was drilling below 4690 feet today.

Ramsey, Easton et al's Duck Club 1, NW NW NE Section 10-16n-4w, important semi-wildcat test in Logan County, was drilling below 4000 feet and reported running slightly lower than Eason Oil Company's Cotcha, discovery well approximately one mile north.

Darst Creek Allowable Ten Per Cent of Potential

San Antonio, Texas.—New proration schedule for the Darst Creek field, effective October 15, allows this field 14,000 barrels daily, as compared with the former allowance of 18,000 barrels. The field has a potential production of 139,006 barrels from 270 producers, making the proration approximately 10 per cent of the total possible output. Wells producing less than 100 barrels are not prorated.

The schedule by companies follows:

Company	No. Wells	Potential	Oct. 15 Allowable	Oct. 1 Allowable
Abercrombie & Harrison	5	2,920	276	360
La Jita Corp.	3	9,556	903	1,179
Cranfill & Reynolds	1	70	70	70
Empire Gas & Fuel Co.	8	1,606	239	280
Gulf Prod. Co.	51	25,421	2,454	3,187
Humble O.&R. Co.	57	34,838	3,292	4,315
United N.&S. Dev. Co.	17	8,355	878	1,116
Magnolia Pet. Co.	47	10,981	1,116	1,429
John R. Black	1	54	54	54
Stroube & Stroube	1	75	75	75
Sun Oil Co.	16	13,393	1,266	1,654
Texas-Humble et al	1	602	57	74
The Texas Co.	55	30,884	3,006	3,693
L. C. Turman	1	8	8	8
Trinity Drillers, Inc.	3	146	146	146
H. H. Weinert (A)	1	75	75	75
H. H. Weinert (B)	1	35	35	35
H. H. Weinert (C)	1	50	50	50
Field Totals	**270**	**139,006**	**14,000**	**18,000**

Another Hunton Lime Well South of Voshell Pool

Wichita, Kansas.—J. E. Mabee and Shell Petroleum Company have a new Hunton limestone discovery in Nickel 1, CNE NE SW Section 33-21-3w, four miles south of the Voshell pool and about four miles northeast of the Hollow pool. One foot in the lime at 3467 feet, operators had 2000 feet of oil in the hole in 50 minutes and an additional 500 feet during the next hour. On the last reports it was shown making a five-barrel flow at five minute intervals while tankage was being erected. Oil tests 44 degrees at 70°F. This is the second area in the state to produce from Hunton limestone which makes the find of importance even though it does not make a large well.

Breslin et al's Hill 1, SEc Section 27-19s-2w, several locations west of production in the area between the Ritz and Decker pools in McPherson County, had top of the Chat horizon at 2949 feet and pay from 2954 to 2955 feet, the total depth. It was immediately shut in and no estimate of production made. It has, however, the appearance of making a good producer.

Fountain-McCoy et al have announced tentative location for No. 1, CSE SE NE Section 3-33s-2e, approximately three miles south of the old Oxford pool in eastern Sumner County.

Central Western Kansas

Derby Oil Company has successfully shut off water and was preparing to tube and pump Stoltenberg 1, CNE SE SE Section 21-16s-10w, west of the Stoltenberg pool in southwestern Ellsworth County. At a total depth of 3362 feet, 44 feet in the Arbuckle "Siliceous" lime, a trace of water was encountered and the hole plugged back to 3356 feet. It was standing at this depth with 2000 feet of oil in the hole.

Roy Ramsey was drilling below 1300 feet in School Lot 1, NW SW NW Section 32-19s-9w, five miles northeast of the Schurr-Raymond pool in Rice County. Salt was reported from 828 to 1050 feet and the 12-inch casing set at 1162 feet. It is located on a small tract almost in the center of a block belonging to Gypsy Oil Company, which may be forced to drill several offsets.

Derby Oil Company et al were digging cellar and pits for No. 1, CNE NW SE Section 12-17s-10w, in the Stoltenberg area of Ellsworth County.

Kansas Producers Asked To Reduce 10 Per Cent

Topeka, Kansas.—Thurman Hill, member of the Kansas Public Service Commission and one of the leaders in the recent fight against cuts in the crude oil price schedule, announced Tuesday, October 11, that he was requesting all Kansas purchasers to reduce their takings 12 per cent, effective October 15. Over the past few months the state has averaged about 100,000 barrels daily production, which would be reduced to approximately 88,000 barrels if the suggested cut is applied. Daily allowable for the state is 117,000 barrels. Whether it is being suggested that purchasers reduce takings 12 per cent according to any plan they should desire is not known but the cut, if adopted, probably will be applied only to the flush or semi-flush areas.

Voshell Pool Given 60 Per Cent of Potential

Wichita, Kansas.—Operators in the Voshell pool of McPherson County have been granted an October allowable of 60 per cent of potential on all deep sand wells and 100 per cent of potential on all chat wells based on new potential ratings secured on a five-day test completed on October 9, 1932. According to the report of state proration umpire Lloyd R. Pickrell, 95 deep sand wells produced a total of 49,810 barrels of oil and an estimated 28,635 barrels of water during the five-day test. Eight chat wells produced 3607 barrels of oil and 985 barrels of water. Sixty per cent of the new deep sand well potential and 100 per cent of the chat well potential gives operators approximately 6701 barrels daily allowable for the remainder of the month. Total pipe line runs for September were 201,382 barrels, a daily average of 6710 barrels.

Ritz-Decker-Garrett Area Output Ordered Lower

Wichita, Kansas.—Operators in the Ritz-Decker-Garrett area of McPherson County were notified on October 7, to reduce production from Viola limestone wells to 8.6 per cent of potential and chat wells to 7.6 per cent of potential, except, in each case, all wells receiving minimum allowable. This was a cut of one per cent below the allowable for September and was brought about through reductions in nominations for the area. As of October 1, 100 Viola limestone wells had a daily potential of 107,451 barrels and 69 chat wells had 49,025 barrels, making a total potential of 156,476 barrels for the area. Allotments for September were as follows: Chat well area, September 1-6, allowable, 7.8 per cent of potential; September 7-30, allowable 8.6 per cent of potential; Viola lime area, September 1-6, allowable 8.8 per cent of potential, September 7-30, allowable 9.6 per cent of potential. Minimum allowable wells in the chat area are granted 100 barrels daily and those in the Viola lime area 50 barrels. Sixty-two chat wells are producing on full capacity or receiving the minimum allowable while only 14 Viola lime wells are so classified.

The Public Service Commission, through its agent, Lloyd Pickrell, and with the cooperation of purchasers and producers, has been able to keep the Ritz-Decker-Garrett area in such alignment that many of the problems encountered in other flush pools have not been faced here. Total allotments for September were 569,904 barrels compared with total pipe line runs of 531,349 barrels, leaving a current underproduction of 38,555 barrels. Dickey Oil Company's Decker 4, Section 35-19s-2w, is the largest well in the area, being rated at 14,326 barrels from the chat horizon.

Oil Nomenclature To Be Considered

Dallas, Texas.—Members of the American Petroleum Institute Committee on Production Records and Nomenclature have been called by Dr. J. French Robinson, national chairman, to meet in Houston, November 14, prior to the annual meeting of the Institute on Tuesday, Wednesday and Thursday, November 15, 16 and 17. At his direction, C. A. Young, secretary of the Division of Production, from the division office in Dallas, has sent out requests to members to forward comments and suggestions to district chairmen so that a summary of opinions may be compiled for consideration. The district chairmen are: California, P. C. McConnell; Eastern, J. G. Montgomery, Jr.; Mid-Continent, F. A. Lichtenheld, and Southwestern, Harold J. Vance. In his letter to members, Mr. Young advised that the importance of uniform records and nomenclature has been augmented by work of the committee on well spacing and the committee on production practice.

Wichita, Kansas. — Derby Oil Company has withdrawn as a purchaser in the new Hollow pool of Harvey County, leaving Skelly Oil Company and Hollow Pipe Line Company the only transporters. Allowable for the field has been reduced from 179 to 94 barrels daily to be divided among eight wells. Hollow Pipe Line Company, which has a two-mile line from the field to a loading rack at Burton, has increased its carrying charge from five to 7½ cents per barrel .

Kansas Field Developments

Completions

Company, Well and Location	Initial Production Bbls.	Depth
COWLEY COUNTY—		
Roth and Faurot, Southwestern College 4, ne sw se 22-32-4e	300	3323
DOUGLAS COUNTY—		
Pure Oil Co., Leuf 1, nwc se 31-14-19e	*	2110
ELLSWORTH COUNTY—		
Viking Oil Co., Satran 1, se c nw sw 5-14-9w	¶¾	1385
FINNEY COUNTY—		
National Refining Co., Wells 1, swc 13-23-30w	*	5873
GREENWOOD COUNTY—		
McHinness, Gaffney 3, ne c sw ne 18-24-11e	*	2125
Sinclair-Prairie Oil, Davis 2, sw se se 6-24-1w	20	1814
HARVEY COUNTY—		
W. C. McBride, Inc., Friesen 2, nwc sw 20-22-3w .....19 hrs.	1292	3505
Phillips Pet., Warkentine 1, cnw sw sw 20-22-3w .....19 hrs.	1033	3495
McPHERSON COUNTY—		
Phillips Pet., Hindmarsh 2, swc se sw 20-19-1w	726	3439
Shawver and Shell, Lively 3, nwc se nw 21-19-1w	¶55	2958
Derby Oil, Unruh 3, nwc se 26-19-2w	258	3418
Rosespring Drilling Co., Dielman 3, ne c sw 35-19-2w	1686	2958
Barnsdall and I.T.I.O., Bridgens 1, scw sw se 35-19-3w	68	3045
Shell Pet., Lawrence 2, csw ne nw 35-19-3w	135	3052
Slick-Pryor-Lockhart, Inc., Grattan 1, ne nw nw 34-20-3w (owdd) 2 hrs	150	3488
OSAGE COUNTY—		
R. Dillard, Taylor 1-A, se c ne 1-17-13e (twin)	*	2072
L. Boyd, Horn 1-A, se sw nw 23-18-14e	*	1440
RENO COUNTY—		
Olson Oil, Johnson 1, swc nw 24-23-4w (cwdd)	60	3347
Martin et al, Yoder 1, cnw nw 15-24-5w	*	325
SEDGWICK COUNTY—		
Continental Oil, Brown 1, csl nw sw 15-25-1e	*	3433

New Operations

COWLEY COUNTY—McKnabb, Morrow 1, ne c sw 11-32-4e; Davis et al, Hopt 1, nw sw ne 22-32-4e.

ELK COUNTY—Austin et al, Wade 1, se c ne ne 22-32-4e.

GREENWOOD COUNTY—Henderson-Holden, Hess 4, se c nw nw 34-22-11e; Henderson-Holden, Smith 1, swc ne 34-22-11e (twin); Dalton et al, Souder 1, cnl nw nw 19-23-13e; A. F. Landon, Smith 5, se sw nw 8-24-12e; McGinness, Threll 1, ne se ne 17-24-12e.

HARVEY COUNTY—Skelly Oil, Martin 1, se c 19-22-3w.

McPHERSON COUNTY—Rosespring Drlg. Co., Dick 1, ne c 21-21-3w; Rosespring Drlg. Co., Neufeldt 1, ne c nw 21-21-3w.

RICE COUNTY—LeBow & Weaver, Ellis 1, swc se 16-19-9w.

RUSSELL COUNTY—Joe Liggett, Hines 1, cnw nw 16-11-15w; J. J. Hall et al, Miller 2, ne c 31-14-13w.

SEDGWICK COUNTY—Derby Oil Co., Eastborough 7, ne sw ne 19-27-2e.

WOODSON COUNTY—McGinness, Schaffer 2, sw ne sw 31-23-14e.

Wildcat Drilling Report

(Wells shut down not included)

STEVENS COUNTY—Louisville Gas & Const., Phillips 1, cse 11-35-35w, rig.

SUMNER COUNTY—Austin et al, Foy 1, sw se se 14-34-1w, dr 3560 ft.

SEDGWICK COUNTY—Cameron & Great Basin, Landson 1, cse nw 13-28-2e, td 2975 ft; ur 6-in.

PRATT COUNTY—Ninnescah O&G, Hardesty 1, sw se se 28-17-11w, 6-in 2950 ft; td 2954 ft wocs.

SEDGWICK COUNTY — Scroggins et al, Bartlett 1, nw se nw nw 35-27-1e, sd 1550 ft.

BUTLER COUNTY — Ramsey, Michael 1, sw nw nw 18-27-3e, 8-in 2164 ft; dr 2350 ft.

RENO COUNTY—T. L. Johnson, Crotts 1, ne nw ne 27-26-10w, rust.

FINNEY COUNTY—Joe Denham, Brown 1, csw 16-25-34w, moving in tools.

FORD COUNTY—Swain et al, Henthorne 1, cnw 21-25-24w, 4-in 5505 ft; 5517 ft hfw; sd 5525 ft.

STAFFORD COUNTY—Stringer et al, Swindler 1, sw ne 2-25-11w, spd and sd.

EDWARDS COUNTY — Mid-Kansas O&G, Converse 1, sw ne ne 30-24-18w, 5-in 4962 ft; Sil Ls. 4968 ft; 4970-75 ft hfw; dr 4980 ft.

FINNEY COUNTY—National Ref. Co., Wells 1, swc 13-23-30w, td 5872 ft d&a.

HARVEY COUNTY—Herndon et al, Santa Fe 1, nw sw 19-23-1e, dr 3222 ft.

MARION COUNTY—Darby et al, Pankratz 1, nw se 5-20-1e, dr 2320 ft.

COFFEY COUNTY—Baker et al, Hertig 1, nw sw nw 31-20-14e, sd 2051 ft.

RUSH COUNTY—Barnsdall et al, Schultz 1, swc 3-19-16w, 8-in 3442 ft; dr 3451 ft.

BARTON COUNTY—Skelton Oil, Ott 1, cse se 16-19-14w, td 3605 ft; sr 5-in csg.

RICE COUNTY—Ramsey et al, School Lot 1, nw sw nw 32-19-9w, dr 725 ft.

McPHERSON COUNTY—Bailey-Carlson et al, Carlson 1, sec 4-19-3w, dr 1973 ft.

MARION COUNTY — Vernon-United Pet., Schmidt 1, csw nw 35-19-1e, rog; Farrell et al, Williamson 1, cnw se 21-19-4e, machine.

BARTON COUNTY—Smith, Ash et al, Wilson 1, cnw sw 13-18-14w, 10-in 1972; dr 2253 ft. Ranken et al, Sooey 1, csw ne 34-18-12w, lcn.

ELLSWORTH COUNTY — Lee Morgan et al, Andrews 1, ne sw 3-17-8e, 2110-20 ft wtr; 10-in 2120 ft; 2170 ft wtr; dr 2535 ft.

MORRIS COUNTY—Urschel et al, Bersuch 1, cnw se nw 10-17-7e, sd 1385 ft.

ELLSWORTH COUNTY — Phillips, Hochman 1, ne nw se 17-16-7w, 2380-90 ft wtr; 8-in 2553 ft; dr 2765 ft; Raymond Gear & Hannah, Kroboth 1, se nw 12-15-10w, 15-in 305 ft; td 455 ft; rng 12½-in.

ELLSWORTH COUNTY—Viking Oil, Satran 1, cnw sw 5-14-9w, sand 1380-85 ft td; 3¼ million gas; sd for orders; Bickford, Burke 1, cne sw 14-14-9w, spd 50 ft and sd; Gurley Bros. & Barnsdall, Union Pacific 1 nw sw 7-14-7w, sd 1075 ft; Walker Oil Remley 1, sw se ne 23-14-7w, td 3457 ft; ur 6-in.

DOUGLAS COUNTY—Pure Oil, Lamb 1, nw se 31-14-19e, dr 2100 ft.

DICKINSON COUNTY—Severs et al, Livingood 1, se nw 13-13-2e (owdd) td 4886 ft; fsg.

LEAVENWORTH COUNTY — West et al, Korb 1, cnw ne 32-10-21e, sd 928 ft.

GRAHAM COUNTY — Schleimeyer et al, Smith 1, se c 24-8-25w, dr 3175 ft.

EAST CENTRAL TEXAS

Dry Holes and Pumpers Are Included in Week's List of Completions; Producers Worth 88 Cents More Daily.

H. H. KING, *Staff Representative, Fort Worth, Texas*

New Operations Make Big Rebound After Lull in Permits

Tyler, Texas, October 14.—New development work in the East Texas oil field staged an unexpected increase when a total of 120 locations were listed for the week ending October 14 as compared to a total of 65 during the previous week.

While the advance notice given the higher price schedule may have been responsible for a part of the gain in locations, the companies making the largest number of new locations did not act solely for that reason. Some had made authorizations to take care of direct offsets of long standing and to place production on undrilled units within the large tracts before it became known that the majority of the purchasers in the field would post a 12-cent higher price to be effective at the same time the well allowable was cut from 44 to 40 barrels daily.

Resumption of development work on a large scale in the East Texas oil field was credited to Magnolia Petroleum Company and Atlantic Oil Producing Company during the past week. The latter increased its field activity to 26 operations after having slumped to a low level. Magnolia Petroleum Company finished the week with a net gain of 13 operations, making a total of six drilling tests; nine derricks and rigs; and seven locations. Mid-Kansas Oil & Gas Company reports six active tests; 25 derricks and rigs; and five locations, or a net gain of three operations over the previous week.

A location within the productive limits of the field was included in the four dry holes listed as completions last week, and several other completions will probably require pumping equipment to make their allowable. Tidal Oil Company's J. J. Castleberry 14, located in the nothwest corner of 202-acre lease, D. Sanches survey, Gregg County, failed to respond to two shots given at the expected oil horizon and has been plugged at 3706 feet. Sun Oil Company has abandoned a north offset location on the Gray tract. Noncommercial wells were completed some months ago to the southwest of the above failure by Arkansas Fuel Oil Company and Columbia Oil & Gas Company, indicating that the Woodbine sand is almost entirely missing, probably because of local faulting.

Humble Oil & Refining Company sustained its third dry hole in trying to produce from leases located on the east edge of north portion of the field. This company's J. P. Owens-Ward 1, located in the northwest portion of the D. Meredith survey and a short distance east of production, missed the sand and quit in Georgetown lime at 3710-19 feet. Pennsylvania Oil Company's T. B. Harris 2, located in the northeast part of the John Ruddle survey and a short distance west of a 3598-foot dry hole drilled by Morris & Dabney, threatened to add another failure to the east edge of the field after failing to encounter sand after drilling past the 3520-foot level. Two failures credited to the west side of the field, included A. B. Geppert et al's Bailey-Thomas 1, located on small tract in central east portion of the J. M. Morris survey, Gregg County, abandoned after drilling to 3717 feet, or 3355 feet below sea level. Sharon Petroleum Company (Patten and Oliver) tested salt water and abandoned in sand at 3740-42 feet its Eddy Toole 1, located on a small drilling site in northern Cherokee County and west of production.

Sun Oil Company's T. G. Pressly 2, located on a 48.9-acre lease in the M. Alexander survey, swabbed 25 barrels daily from broken sand at 3638-63 feet, with a surface elevation of 391 feet, and will likely result in a new pumper for the northeast portion of the field. Corbin et al's A. H. Tubbs 1, located in the Spring Hill community to the south, is showing for a similar caliber well after drilling through the producing horizon.

Salt Water

A trace of salt water is reported to have put in its appearance in two offset wells on the southeast edge of the field in the Joiner area, although it is generally believed that water produced by east side wells is due to defective casing or casing seats rather than bottom hole water. Mullins and Strickland's Brewer Cemetery 1, M. V. Pena survey, and Sam K. Vierson et al's McCord 1, a west offset, are credited with showing a trace of salt water. British-American Oil Producing Company's J. D. Stone 1, which attracted considerable attention last May when it developed four per cent water with the hole bottomed at a sub-sea depth of 3298 feet, is now free of water after plugging back, according to Geo. W. Sneddon, vice president. This well is located near the center of the M. J. Pru survey, and near the middle of the widest section of the Joiner area.

A fourth producer in the Jamestown area, southeastern Upshur County, is in process of completion with indications now favorable for this abnormal Woodbine sand pool to cover a sizeable area. J. K. Wadley-J. P. Evans and Charlton Lyons' W. S. Jones 1, located in southeast corner of 110-acre lease, Jas. M. Dunn survey, logged cap rock at 3680 feet followed by one foot of salt water sand then shale and lignite at 3681-84 feet. A core taken at 3684-90 feet revealed one foot of well saturated oil sand. A string of pipe has been cemented immediately below the water horizon. This test has a surface elevation of 363 feet. A successful completion would assure the pool a length of about four miles. Presence of salt water above the oil and gas horizon in the Woodbine sand was noted in the other three producers, and such a condition is very unusual.

New Schedule Raises Well Worth 88 Cents Per Day

Tyler, Texas.—A net gain of 88 cents per well in daily gross revenue is in store for owners of producing wells in the East Texas field should the crude price increase of 12 cents per barrel initiated by Sun Oil Company, to become effective October 15, date set a four barrel cut in the well allowable, be adopted by all other purchasers in the field. Sufficient number of crude buyers have given their endorsement to the price increase to indicate that a $1.10 quotation will soon become general.

The gross revenue from a producing well in the East Texas field observing proration during the October 1-15 period was $43.12. Wells participating in the price increase will have a daily gross revenue of $44.00, even though the well allowable at the start of the October 15 period is reduced four barrels to a new low level of 40 barrels daily.

Five consecutive price increases without a setback has been the record of the East Texas field within the past 14

months. Magnolia Petroleum Company, only major company to maintain a posted price when proration restrictions were thrown overboard in the summer of 1931, introduced the four previous price increases. On August 13, 1931, the latter concern advanced its price from 20 to 25 cents, then on August 22 hoisted the price to 68 cents. A 15-cent boost was initiated on November 2, followed by the posting of a 98-cent price on April 1, 1932. Several threats of a collapse of the price structure have appeared since April, but same were staved off at the eleventh hour through a downward revision of the allowable of the field.

Sinclair Prairie Oil Marketing Company, purchasing unit for Consolidated Oil Corporation, was the first to lend support to Sun Oil Company's efforts towards an adjustment of prices in East Texas. The former made the increase general in areas covered with a price schedule. Shell Petroleum Corporation made its first official price posting when announcement was made October 12 that the $1.10 price would be put into effect in East Texas along with the others, and a similar stand was taken on the same date by Empire Gas & Fuel Company. Endorsement of the higher price in East Texas was given on October 13 when new postings were issued by The Texas Company, Arkansas Fuel Oil Company and Panola Pipe Line Company (H. L. Hunt), making a total of seven buyers.

East Texas Thieves Do Not Stop at Taking Crude Oil

Tyler, Texas. — Installation of shelter houses over completed flowing wells in the East Texas oil field has been proven a practical and economic means of warding off vandals and also christmas tree equipment thieves. A number of companies have covered their wells in this manner after dismantling derrick, as they have found that nocturnal visitors are more inclined to pass up a protected well and make their raids on those offering easy access. Jenkins Oil Corporation, Dallas, erected galvanized iron shelter houses over each of its four flowing wells on the Wm. Cobb lease at a cost of about $15 each, and with the aid of a stout padlock and chain has checkmated its losses of expensive fittings and valves.

Marion County Test Shut Down on Top of Wilcox

Marshall, Texas.—Wroe-Nichols' (formerly M. E. Nash and Associates) Henderson 1, George Bledsoe Survey, Marion County, which checked 50 feet high on the Pecan Gap and Austin Chalk contacts, is believed to have encountered the Woodbine caprock and early last week was shut down at 3495 feet curing titles. Elevation is 238 feet and the Austin Chalk was logged at 3452 feet and continued 40 feet. Base of Pecan Gap was 2725 feet. It is claimed that the well checks 11 feet higher on the cap identified as Woodbine cap than does the average in the East Texas field, and that it is 151 feet above the East Texas water line.

Although between two dry holes drilled below this depth, this test has aroused more interest than any recent Marion County operation. Location is only a short distance from the Harrison County line.

East Texas Wildcat Interest Shifts Back to Franklin

Tyler, Texas.—Wildcat interest in the Woodbine sand belt in East Texas was scheduled to shift back to Franklin County over the week end for the bailing and testing of J. F. Mills-McGee-Harper and Ashby's L. S. Harper 1, located about 10 miles northwest of Mount Vernon. This wildcat has been credited from reliable sources with having recovered an oil saturated sand in the Woodbine horizon near the 3400-foot level, although the owners have elected to withhold the details. It tested salt water when bailed September 12, and investigation revealed several joints of split casing as being the source of the water. A string of 5 3/16-inch pipe has since been cemented near the 3270-foot level, and the plug drilled late last week. Approximately $100,000 in leases and royalty have been expended by independents and a few large companies near this test since it first commanded interest in August.

Confident that Harper 1 has uncovered an oil saturated sand formation, Fred Prince-Bob Peveto and others are drilling below 1300 feet on a test located in the southwest corner of the M. Ferguson 40-acre lease, Z. Rogers survey, and about three-quarters of a mile to the northwest. The two tests should definitely establish proof if the faulted structure is capable of producing.

Elimination of Geo. Anderson and M. Grubb's wildcat test on the W. W. Moody tract, near Elmo, Kaufman County, was considered complete when a depth of 3542 feet was reached without encountering sand in the Woodbine series. However, the owners plan to deepen to the lower Woodbine. Fred Harris and Geo. Greer's wildcat on the Markovitz tract, near Emory, Rains County, was ordered plugged after drilling through the Woodbine sand into red beds at 4460-4533 feet, where it was plugged as a failure.

In Cherokee County, Pure Oil Company's W. P. Nicholson 1, located on the Summerfield structure, was drilling in sandy-shale at 4412 feet and apparently below the expected producing horizon, as the top of the red beds was logged at 4223 feet.

Rotary rig has been erected for the drilling of a Woodbine sand test on a block of about 4700 acres acquired recently in Wood County by F. B. Parriott and J. S. Hanlon of Tulsa. The location is on the John H. Harvey (was Stuart) 1964-acre tract, being 200 feet from the north line of the M. H. Ussery survey, and 1000 feet east of the highway, or abandoned railroad dump. This block was assembled for the above parties by R. B. Strayhorn, Fort Worth, formerly with Transcontinental Oil Company, and centers around the large drilling site. Contrary to reports, only one test is scheduled to be drilled by Parriott et al. It is about 10½ miles southwest of Winnsboro and in the northeast part of the county.

Three New Ones

Three of the new wildcat locations announced last week were allotted counties in the northeast part of the state. In Bowie County, W. J. Dobbs, Tom Bell and Fred S. O'Neill are moving in materials to drill on the Mrs. T. M. Ross tract, Oren D. Watson survey. A large block of acreage has been assembled by the operators sponsoring this wildcat. Interest in the county was revived recently when the wildcat test of J. M. Burnham-Marr and Robinson on the F. O. Weiss tract, J. Dean survey, logged a number of oil showings in the Trinity series between 3722 and 3862 feet, with water appearing at intervals. This test is scheduled to be deepened. Texon Oil Company is to drill on a 2500-acre block in western Cass County and about three miles southeast of Naples, having made

location in the northeast corner of the C. W. Kessler 125-acre tract, H. Haas survey. Grover Hart et al plan to drill on a 4000-acre block acquired recently in Morris County and about three miles south of Cason, having made location on the Walcott-Lott 577-acre tract, D. A. Russell survey. W. L. Murrell and Geo. Pace originally intended to drill on the above tract, but abandoned the project last summer. Buchanan-Burkhalter et al's Staggers 1, J. D. Nelson survey, located about 9½ miles north of Cason, are reported to be preparing to make a drill stem test after claiming a cap rock at 3666-68 feet followed by an oil saturated sand to 3672 feet. Rumors of an oil saturated sand at 3519 feet furnished the basis for a sizeable lease and royalty play in the area last spring.

Cherokee County added a new wildcat through the starting of a Woodbine sand test in the southwest part of the county and about eight miles southwest of Jacksonville by A. L. Vandeventer-Hopcroft et al on the J. R. Taylor 233-acre tract, G. M. Doherty survey. On the extreme east edge of the county, J. J. Hooper and others are to undertake to establish a west extension to the East Texas oil field by drilling in the northeast corner of the Jesse Overton 205-acre tract, Wesley Dikes survey. This tract was acquired recently from Amerada Petroleum Corporation for $100,000, payable from one fourth of the first production, along with the assumption of a drilling obligation.

Midway Dome Well Has Oil Standing in Hole

Casper, Wyo.—The Midway dome well, being drilled on the structure by that name 12 miles north of Casper by Mutual Oil Syndicate, is now cleaning out with cable tools. The bottom of the hole has been found filled up 30 feet with solid cavings; when about 13 feet of this had been cleaned out, the oil rose within 700 feet of the top. When hole is cleaned out to bottom a test will be made and if the well does not flow it will be drilled deeper and given a swabbing test. Formation is Muddy sand.

Vernon, Alabama.—P. J. McAlpine and Associates' Gardner 1, NW NW Section 22-15s-17w, Lamar County, Alabama, which recently encountered three shows of oil in the Mississippi between 3100 and 3200 feet, will go to at least 3500 feet, the owners announced last week. On October 13 the test was drilling sandy shale at 3226 feet. Original contract depth had been 3250 feet.

South Alabama Oil & Gas Company's St. Stephens A-1, Section 26-7n-1w, Washington County, Alabama, last week was drilling sandy shale at 1850 feet.

East Texas Field Developments

Completions

Company, Well and Location	Initial Production Bbls.	Depth
JOINER AREA—		
Amerada Pet. Corp.-Deep Rock Oil Co., Stovall (196-ac) 15	6500	3639
Arcadia Ref. Co., J. R. Green 6-A	9600	3729
Ebony Oil Co., A. J. Deason (25-ac) 4	1200	3700
J. F. & E. F. Graham, S. S. Cook 1-B, Blk. 8	10,000	3761
Gulf Prod. Co., W. P. Keeling (40-ac) 4	7000	3748
W. B. Hinton et al, H. Mayfield (94-ac) 7	9600	3761
H. H. Howell et al, Gus Johnson (31.84-ac) 2	7500	3826
Humble O&R Co., Lula Barton (64½-ac) 4	9000	3772
Sol Dennis (68¼-ac) 4	8600	3788
C. Pilgreen (70-ac) 8	8500	3794
R. E. L. Silvey (209-ac) 8-B	1200	3777
M. C. Thompson (126½-ac) 6	9500	3620
K. O. T. Oil Co., S. S. Cook (46-ac) 4	11,000	3759
Lucey Pet. Co. & F. W. Roe, B. F. Maxwell (21-ac) 3-B	7200	3685
McClanahan & Venable Oil Co., J. A. Birdwell 10	8800	3647
John F. Merrick et al, Neal Cooper (20-ac) 2	500	3616
Mid-Kansas O&G Co., M. M. Cross (814-ac) 42	8000	3638
M. C. DeGuerin (160-ac) 7	7000	3664
Kangerga 2, Acct. 1	8000	3622
Painter-Duncan & Hinchcliffe, M. & L. Hale (10-ac) 1	1000	3745
Perry-Woody & C. W. Boller, E. A. Thrash (31-ac) 5	6500	3692
Geo. B. Ray et al, L. J. Pinkston (50-ac) 4	9000	3630
Sharon Pet. Co. (Patten-Oliver-Murrey), Ed. Toole (½-ac) 1	*	3742
Sinclair Prairie Oil Co., Peter Tipps (230-ac) 9	8400	3628
Amanda Wiley (312-ac) 8	8500	3785
Stanolind O&G Co.-Pure Oil Co., W. H. Siler (949.6-ac) 31	7200	3701
W. H. Siler (949.6-ac) 35	8500	3676
A. B. Stoddard & Delaney, E. L. Pinkston (20-ac) 3	9000	3655
The Texas Co., W. W. Henry (229-ac) 2	7000	3658
Allen Kersh (211-ac) 7	7500	3638
Virgo Oil Co., Green 1	10,000	3805
J. S. Wheelis & C. B. Bunte, I. J. Smith-Gulf (101.7-ac) 7	7200	3714
Zion Oil Co., J. Wilson-Sartain (10-ac) 1	†	3300
J. Wilson-Sartain (10-ac) 1-A	8500	3839
KILGORE AREA—		
W. M. Angle & Kuykendall, John Curnegans (3-ac) 1	9500	3717
Atlantic Oil Prod. Co., S. G. Anderson (110-ac) 8-A	10,000	3596
Blue Star Oil Co., Sabine River 6-A	11,000	3537
Sabine River 7-J	9600	3502
Sabine River 7-K	9600	3500
East Texas Oil Ref. Co., Andy Givins 3	7000	3640
A. B. Geppert et al, Bailey 1	*	3717
Gulf Prod. Co., C. Brown (254-ac) 15	10,500	3547
S. B. Hall (50-ac) 3	9500	3654
A. Nichols (52-ac) 4	7000	3697
H. C. Hensley & Dutton, L. Howard (1-ac) 1	10,000	3548
Wm. C. Holcomb (was W. C. Knox) et al, S. S. Smith (2-ac) 1	9600	3684
Humble O&R Co., W. D. Peterson (100-ac) 4	7500	3610
F. B. Jackson & Eysenbach, W. D. Williamson-Stanolind (116-ac) 2	4000	3682
Jones-O'Brien, Inc., M. B. Hughey-Ross (127-ac) 8	9600	3583
J. E. Mabee, Inc., M. T. Cole-Shell (120-ac) 3	11,500	3552
W. M. McVey et al, Roy Laird 1, Blk. 137	3500	3585
Murray Oil Co., V. H. Barton (3-ac) 1	8000	3750
Navarro Oil Co., E. G. Green (23-ac) 4	6500	3576
Pelican Nat'l Gas Co., A. Spear-Laird (92-ac) 6	7500	3632
Porter & Badgett, Gregg Ind. School Dist. (1-ac) 1	8000	3735
Rhoads Drl. Co., Sabine River 3, Tr. No. 4	9500	3552
Shell Pet. Corp., J. S. Elder (50-ac) 3-A	8000	3588
B. F. Laird (211-ac) 8-A	10,000	3595
M. J. Register (50-ac) 3	8800	3660
Sinclair Prairie Oil Co., M. T. Cole (666-ac) 32	1200	3593
J. Elder (47-ac) 7	11,000	3541
J. E. Lawther (317-ac) 10	5000	3583
Sun Oil Co., J. R. Beall (180-ac) 10	9600	3619
Tidal Oil Co., M. G. Barton (193-ac) 12	10,000	3577
J. S. Bean (128-ac) 9-A	4000	3612
C. G. Strong (113-ac) 9	10,000	3674
LONGVIEW AREA—		
Atlantic Oil Prod. Co., W. P. Duncan (154.7-ac) 11	10,000	3661
Galvez Oil Corp., M. O. Sheppard (36-ac) 3	9600	3560
Geisler-Armstrong & Phillips, Gladewater 1, Blk. 25	11,000	3643
Gulf Prod. Co., M. O. Sheppard (335-ac) 21	14,000	3500
A. R. Hancock et al, Brawley (4.6-ac) 1	10,500	3512
Humble O&R Co., J. M. Adams (100-ac) 3	†	2000
J. F. Boles (100-ac) 7	11,000	3649
J. K. Edwards (270-ac) 15	10,500	3643
J. P. Owens (290-ac) 1	*	3719
A. J. Watkins (76½-ac) 4	7800	3690
Inland Oil Co., M. Fenn (17-ac) 2-B	12,000	3654
Island Oil Co., J. W. Akin (36-ac) 2	9600	3557
Kewanee O&G Co., Fee (168-ac) 12	15,000	3647
J. F. Lucey, Rec. (Jas. M. Ross), Anderson 2	10,000	3560
Magnolia Pet. Co., Jim Allen (38-ac) 5	10,000	3712
H. B. Zeigler (120-ac) 8	12,000	3446
T. H. McKinney et al, D. H. Brawley 1	3000	3726½
Selby O&G Co., A. Miller (85-ac) 5	7400	3595
Shell Pet. Corp., S. C. Fishburn (100-ac) 7	7200	3553
Simms Oil Co., A. Christian (23-ac) 4	10,000	3583
Sun Oil Co., J. W. Akin (166.2-ac) 11	11,500	3603
The Texas Co., H. L. Phillips (136-ac) 4	9600	3648
Chapman Thomas, Rec. (Dewitt Travis), J. H. Gage (3½-ac) 1	7200	3642
Tidal Oil Co., J. J. Castleberry (202-ac) 14	*	3706
Dr. E. L. Walker et al, Fee (1-ac) 1	10,000	3610
Yount-Lee Oil Co., T. W. Lee 4	9600	3600
S. G. Smith (56-ac) 6-C	11,000	3542
VAN FIELD—		
Pure Oil Co., L. M. Brawner (147.9-ac) 6	9600	2962
A. D. Clark (42-ac) 2	500	2917
D. R. Howell (60-ac) 5	11,000	2955
A. F. Magers (72½-ac) 4 5 mil ft gas and	3500	2939
W. E. Morris (68½-ac) 3	50	2986
J. T. Taylor (43.8-ac) 3	10,000	2956
The Texas Co., R. A. Tunnell (100-ac) 7	1000	2938

East Texas Field Developments

Completions

Company, Well and Location	Initial Production Bbls.	Depth
RAINS COUNTY—		
Fred Harris & Geo. Greer, M. A. Markovitz 1	*	4533

Wildcat Drilling Report

(Wells shut down not included)

ANDERSON COUNTY—W. H. "Bill" Roeser et al's M. A. Davey 1, P. G. Adams sur, dk.

BOWIE COUNTY — Roy E. Anderson et al's A. Y. Breckenridge (464-ac) 1, M. Dykes sur, elev 352 ft, top Nacatoch 775 ft, top Saratoga chalk 1180 ft, Pecan chalk 1362-1805 ft, coring shaley-lime 2705 ft. J. M. Burnham-M. H. Marr-J. B. Greer-C. W. Robinson et al's F. O. Weiss (949-ac) 1, J. Dean sur, elev 388 ft, anhydrite 2945-3030 ft, 1st oil saturated sand in Trinity series 3722-28 ft, sd tested salt water in sand 3861 ft. W. S. Langford et al's W. W. Whybark (100-ac) 1, J. H. Dyer sur, fsh 2240 ft.

CASS COUNTY—Lapan-Lovejoy et al's S. A. Orr (320-ac) 1, G. W. Morris sur dk. Texon Oil Co.'s C. W. Kessler (125-ac) 1, H. Haas sur, rig.

CHEROKEE COUNTY — Barclay-Taite & Deason's A. T. O'Neal (13-ac) 1, J. M. Procella sur dk. Bridges-Chandler et al's Berryman (300-ac) 1, H. Kimbel-Dean sur, sd 1000 ft. L. J. Hopcroft & A. L. Vandeventer's J. R. Taylor (200-ac) 1, L. M. Doherty sur. Pure Oil Co.'s W. P. Nicholson (70-ac) 1, R. Stewart sur, elev 455.2 ft top Navarro 2660 ft, Pecan chalk 3172-3593 ft, Austin chalk 4023-4223 ft, dr 4320 ft. Saranac Oil Co.'s P. E. Jones (132-ac) 1, J. D. Hamilton sur. Wilson-Stubbs Oil Corp.'s M. F. Ragsdale (53-ac) 1, J. P. Wolfin sur, sd 3600 ft.

DELTA COUNTY—C. M. Joiner Pet. Corp. et al's J. A. Blackwell 1, H. Dunnetella sur, Woodbine sand 1935-1950 ft, top Georgetown lime 2030 ft, top Comanchean 2913 ft, sd 3310 ft. J. O. Wheeler-Neuville & Yarbro's Ablovich 1, E. Chick sur, elev 507 ft. Austin chalk 1885-1895 ft, sd 3815 ft.

ELLIS COUNTY—Armstrong Bros. et al's Cook 1, S. Frederick sur, cem 5 3/16-in cas 320 ft. Carl Brooks et al's Anderson 1, E. C. Branch sur, base Austin chalk 179 ft, top Woodbine 550 ft, top Del Rio 735 ft, top Georgetown lime 900 ft, cem cas 1050 ft. Paris Oil Co.'s O. S. Bain (60-ac) 1, R. M. Williamson sur, Austin chalk 480-647 ft, dr shale 950 ft.

FRANKLIN COUNTY—Franco Oil Co. (J. F. Mills-L. S. Harper-A. P. McGee et al's L. S. Harper (118-ac) 1, W. N. Dawson sur, elev 356 ft, top Pecan chalk 1320 ft, cem 5 3/16-in cas 3275 ft, td 3404 ft. Bob Peveto-Prince et al's M. Ferguson (40-ac) 1, Z. Rogers sur, rig.

FREESTONE COUNTY — Clyde Creighton & Co.'s W. A. Holley (80-ac) 1, A. B. & M. sur A-51, top Pecan chalk 3105 ft, sd shale 3665 ft.

HENDERSON COUNTY—B. L. Green et al (was J. M. Rogers') M. H. Gossett (103-ac) 1, L. D. Stover sur A-87, elev 341 ft, top Taylor 1450 ft, top Austin chalk 2347 ft dr sandy-shale 3205 ft. Dr. J. F. Kennon (Sunny South Oil Co.'s) Rowe-Baker 1, J. T. Childress sur, dr 925 ft. H. H. Myers et al's M. E. Olson (80-ac) 1, Geo. Wilson sur, elev 512 ft, top Pecan chalk 3070 ft, co 3200 ft.

HILL COUNTY—T. J. Spikes et al's M. H. Davis (55-ac) 1, J. R. Alexander sur, Austin chalk 727-1030 ft, sd 1320 ft.

HOPKINS COUNTY—Burgess & Simpson's Mt. Vernon Nat'l Bank 1, M. E. & P. Ry sur, elev 385 ft, rig. Columbia O&G Co.-K. L. McHenry's W. J. McLeod (85-ac) 1, (east) D. Holbrook sur, elev 485 ft, dr 1000 ft. Harmony Oil Co. (J. F. Roark's) J. L. Taylor (88-ac) 1, John Polk sur, sd 540 ft.

HUNT COUNTY—Arthur Kelsey et al's W. R. Terry (139-ac) 1, Jas. Roads sur, lcn.

KAUFMAN COUNTY—Geo. H. Anderson-Maurice Grubb et al's W. W. Moody (308-ac) 1, H. G. Hider sur, elev 510 ft, Austin chalk 2377-2580 ft, in Woodbine series 3508 ft Tom Nash et al's Mrs. C. H. Gardner (6-ac) 1, E. A. Ferguson sur, lcn. Stanley Darrill-J. M. Scott et al's S. Pannill (649-ac) 1, A. Cherino sur, sd in reported saturated sand 2481-85 ft. Paul Meaders et al's T. C. Coleman (259-ac) 1, W. G. Gibbard sur, cem surface cas.

LEON COUNTY — Leon County Oil Co.'s John Morris (200-ac) 1-A, A. F. McWhorter sur, sd 2539 ft. Shell Pet. Corp.-Penn Oil Co.-J. R. Black et al's Wm. Phillips (160-ac) 1, E. A. Swayze sur, elev 423 ft, Pecan chalk 4135-4181 ft, Austin chalk 4841 ft, dr chalk 5244 ft. John P. Sheffler & Allday's W. R. Thompson (197-ac) 1, N. M. Allen sur, sd 1000 ft.

LIMESTONE COUNTY—C. M. Joiner Pet. Corp.-Miller Drl. Co.'s W. Stephenson (54-ac) 1, Geo. Gentry sur, sd 2765 ft.

MORRIS COUNTY — Buchanan-Burkhalter et al's Staggers (65-ac) 1, Forbes & Nelson sur, elev 370 ft, hard Pecan chalk 2526-3020 ft, Austin chalk 3483-3506 ft, sd for drill stem test in reported oil sand 3668-3672 ft. Grover Hart et al (was Pace's) Walcott-Lott 1, D. A. Russell sur, materials. C. M. Joiner Pet. Corp.-Harris Drl. Co.'s C. D. Brown 1, Wm. M. Coffey sur, dk.

RAINS COUNTY—Fred F. Harris-Geo. Greer et al's M. A. Markowitz (106-ac) 1, Chas. Despallier sur, elev 442 ft, Pecan chalk 2243-2350 ft, Austin chalk 3518-3905 ft, top Woodbine series 4448 ft, top red beds 4460 ft, dry and abn 4533 ft.

RUSK COUNTY—T. E. Castle et al's R. H. Gray (50-ac) 1, J. Latham sur, top Pecan 2678 ft, top Austin 3480 ft, top Georgetown lime 3672 ft, cored show oil and gas in Georgetown lime 3765 ft, fsh 3812 ft. G. A. Hathaway et al's Gray 1, Jas. McClain sur, elev 315 ft, Pecan chalk 2180-2537 ft, top Austin 2980 ft, sd 4000 ft. John Keegans et al's R. L. Needham 1, J. H. Chambers sur, reaming to set cas 1415 ft. R. H. Lemmon & A. F. Richardson's Luke Motley-H. Wood (498-ac) 1, J. I. Sanches sur, lcn. Fred W. Shields et al's W. Buckner (40-ac) 1, John E. Davis sur, rig.

SMITH COUNTY—McRobie et al's C. P. Hamilton (259½-ac) 1, J. Rector sur, rig. Mundt & Mount's Murray (65-ac) 1, Marshall University sur, Navarro 2858-79 ft, elev 579 ft, top Pecan chalk 3496 ft, dr chalk 3790 ft.

UPSHUR COUNTY—J. P. Evans et al's W. E. Bell (63-ac) 1, Wm. McFadden sur, cem cas 123 ft. Scott & Ashland's H. Doughfrate (128-ac) 1, M. P. del Torres sur, Pecan chalk 2600-3024 ft, top Blossom sand 3385 ft, top sand 3740 ft, sd in sandy-shale 4013 ft. J. K. Wadley-J. P. Evans & C. Lyons' W. S. Jones 1, Jas. Dunn sur, elev 263 ft, top broken Pecan chalk 2333 ft, top hard chalk 2402-2977 ft, top Austin chalk 3557 ft cored salt water sand 3680-81 ft and oil saturated Woodbine sand 3684-90 ft, sd to cem cas.

VAN ZANDT COUNTY—Daisy O&G Co.'s Mrs. C. A. Browning (100-ac) 1, J. P. Tackett-Bell sur, Pecan chalk 2109-2230 ft, top Austin 3160 ft, sd 3285 ft. B. E. Gamble et al's I. D. Walker (1-ac) 1, J. Walling sur, rig. J. Alvin Gardner & Roy C. Ling's J. Leonard (53½-ac) 1, Philip Mason sur, elev 511 ft, Pecan chalk 2340-2410 ft, Austin chalk 3475-3781 ft, top Woodbine series 4240 ft, top Georgetown lime 4950 ft, dr lime 4960 ft. A. C. Roan et al's W. E. Price (7-ac) 1, J. Walling sur, Pecan chalk 1680-1895 ft, Austin chalk 2595-2770 ft, sd 2865 ft.

WOOD COUNTY—DeGenther & F. H. Zeigen et al's M. L. McClain (66-ac) 1, Sam Brooks sur, elev 455 ft, Pecan chalk 2553-2740 ft, sd 3845 ft. Hudson-Shelton & Talko Pet. Corp.'s C. S. Ross (86-ac) 1, F. L. Smith sur, elev 359 ft, top Pecan chalk 2892 ft, sd 3840 ft. F. B. Parriott et al's J. H. Harvey (1964-ac) 1, M. H. Ussery sur, rig. Hull & Sharp (was W. B. Saulsbury) et al's T. H. Peterson (320-ac) 1, W. B. McNutt sur A-418, cem cas 110 ft. Wood County O&G Co.'s Guy Davis 1, John R. Clute sur, dr chalk 2880 ft.

East Texas Border Counties

Wildcat Drilling Report

(Wells shut down not included)

HARRISON COUNTY—Ryan Cons. Pet. Corp.'s Furrh 1, F. O'Neal sur, core 4856 ft. Great Eastern Oil Co.'s W. L. Rudd 1, Wm. Steele sur, rig. Pat Hudson et al's Heitt 1, B. B. B. & C. R. R. Co. sur, lcn (530 ac.)

MARION COUNTY—Baunauch Dev. Co.'s Miller 1, H. Fulgram sur, dr 4490 ft. Starling & Preston's Henderson 1, R. Bennington sur, dr 1000 ft. Wroe-Nichols (formerly M. E. Nash et al), Henderson 1, Geo. Bledsoe sur, elev 238 ft, base pg 2725 ft, top ac 3452 ft, sd 3495 ft cur titles.

Texas Permits

New Operations

ARCHER COUNTY—C. C. Williams, Jean, W. Owens, 65, 1, J. Sounders sur, 150 ft from n and w lines. Wichita Prod. Co., Wichita Falls, O. L. Abercrombie, 34, 1, MEP&P sur, 260 ft from n and 300 ft from e line. H. L. Gross, Wichita Falls, A. Finkler, 420, 1, S 18, B 1, H&TC sur, 450 ft from e and 150 ft from s line. Morris & Dunn, Graham, W. J. Schroeder, 157, 1, S 11, B 4, C&P sur, 330 ft from s and e lines. M. L. Wheeler, Archer City 1, Pennartz, 40, 1, L 18, Blk. 3, 450 ft from s and e lines. Fred Carter et al, Wichita Falls, C. S. Arnold, 80, 2, J. Levins sur, 150 ft from n and 1100 ft from w line. Burns & Long, Wichita Falls, L. F. Wilson, 41, 2T, B 75, Amer. Trib. sur, 660 ft s of No. 1. Houston & Houston, Wichita Falls, P. Browning, 90, 9, B 87, GE&L sur, 150 ft from s and w lines. D. H. Rubsam, Wichita Falls, J. C. Stinnett, 40, 1, B 7, A. Nunley sur, 150 ft from n and e lines. W. B. Hamilton, Wichita Falls, A. J. Ikard, 235, 3, J. J. Young sur, 150 ft from n and 300 ft from w line. Schulz & Weaver, Wichita Falls, F. C. Green, 160, 11, J. Levins sur, 2200 ft from w and 1700 ft from s line. T. G. Shaw Oil Corp., Fort Worth, E. W. Williams, 40, 1, J. Sanders sur, 200 ft from s and w lines. Geo. L. Pace, Dallas, C. C. Arnold, 320, 1 J. Levins sur, 910 ft s and 2640 ft from w line.

BEE COUNTY—Southwest Drilling Co., San Antonio, L. M. Riggs, 340, 1, A. Dickson sur, 200 ft from s and 4200 ft from e line.

BEXAR COUNTY—C. L. Witherspoon, San Antonio, W. Kelso, 259, 1, Urriegas sur, 150 ft from n and e lines.

BOWIE COUNTY—Bell, Dobbs & O'Neill, Dallas, T. M. Moss, 465, 1, O. D. Watson sur, 1000 ft from n and 1200 ft from w line.

CALDWELL COUNTY—Jimmie Lanning, Rockdale, Baber, 82, 1, S. Damon sur, 150 ft from s and e lines.

CALLAHAN COUNTY — Matson Drilling Co., Baird, O. E. Radford, 240, 11, S 20, D&D Asy. sur, 300 ft w of No. 9. Geo. A. Perry, Baird, E. L. Finley, 406, 1, S 72, Bayland Asy. sur, 450 ft from n and 1250 ft from w line.

COLEMAN COUNTY — Anzac Oil Corp., Coleman, D. Polk, 216, 1, S 725, B 19, J. Martin sur, 200 ft from s and w lines.

CLAY COUNTY—Ray Wilbanks, Graham, P. E. Willoughby, 120, 1, 2630 TE&L sur, 150 ft from n and e lines.

CHEROKEE COUNTY — L. J. Hopcroft, Tyler, J. R. Taylor, 200, 1, G. M. Doherty sur, 833 ft e of center of w line.

CROCKETT COUNTY—R. C. Chambers et al, Coleman, A. C. Hoover, 640, 1, S 1, B FF, Sur. BB, 1650 ft from n and 330 ft from e li of sec.

DUVAL COUNTY—Central Producers, Inc., Mirando City, H. Wendt, 40, 1, Sur 43, 150 ft from s and e li ne¼ ne¼; R. W. Tuck, 40, 3, Sur. 42, .330 ft from n and e li se¼ sw¼. Plymouth Oil Co., Texon, W. K. Hoffman, 640, 1, S 113, BS&F sur, center of sec. A. T. Stieren et al, San Antonio, J. F. Welder, 245, 1, Sec. 71 sur, 1005 ft from n and 115 ft from w li of sec. Magnolia Pet. Co., Dallas, G. Wendt, 120, 9, S 44, J. Poitevent sur, 330 ft n of center of s line; 10, 330 ft from s and e lines. San Diego Oil Corp., San Antonio, O. Bennett, 40, 3, Sec. 44 sur, 330 ft from n and

w li ne¼ sw¼. Highland Oil Co., San Antonio, A. Lundell, 80, 2, S 42, J. Poitevent sur, south central part of lease.

EASTLAND COUNTY—T. P. Coal & Oil Co., Fort Worth, C. E. Allen, D, 478, 1, R. Bissett sur, 1250 ft from n and 1400 ft from w line; F. W. Allen, 561, 2, M. J. Robinson sur, 330 ft from s and e lines.

FORT BEND COUNTY—Gulf Prod. Co., Houston, F. Gubbels, 100, 2, S. Kennedy sur, 371 ft from e and 585 ft from s line.

GREGG COUNTY — Universal Oil, Gas & Mining Co., Marshall, H. Adkins, 4, 2, D. Dainwood sur, 51 ft from w and 300 ft from s line. R. W. Blalock, Marshall, State 1½, 1, No. 11 R. J. Randolph sur, 25 vs. from w and 150 ft from s line. M. G. Blalock, Marshall, State 1, 1, F. R. Jackson sur, center. Bobby Manziel, Gladewater, E. L. Walker, 3, 1, B 54, M. Dillard sur, 57 ft from n and 21 ft from w line. Red Star Oil Co., Longview, F. Christian, 22, 4, G. W. Hooper sur, 175 ft from n and e lines. Magnolia Pet. Co., Dallas, O. F. Smith, 92, 7, H. H. Edwards sur, 660 ft e of No. 6; W. R. Nicholson, 50, 3, D. Sanchez sur, 330 ft from n and e lines; N. Radford, 79, 5, Jno. Blair sur, 812 ft from n and 330 ft from w line; I. Zeigler, 83, 5, Jno. Ruddle sur, 330 ft from s and e lines; M. T. Cole, 104, 3, T. Johnson sur, 660 ft n of No. 1; H. P. Hale, 50, 2, M. Van Winkle sur, 660 ft s of No. 1. Texas Co., Shreveport, La., T. W. Lee, 210, 10, F. W. Johnson sur, 750 ft s of No. 9; 11, 750 ft s of No. 10. Atlantic Oil Prod. Co., Dallas, J. C. Judge, 520, 28, Johnson sur, 320 ft from e and 90 ft from s line; 29, 265 ft w of No. 30; 30, 300 ft w of No. 28; 36, e offset to No. 6M; 37, e offset to No. 6J; 38, n offset to No. 6I; 39, ne offset to No. 6H; 40, ne offset to No. 6G; 41, e offset to No. 6F; 42, ne offset to No. 6E. Sun Oil Co., Dallas, E. C. Shoults, 100, 5, D. Ferguson sur, 842 ft nw of No. 4; V. Brown, 100, 7, Outlaw & McCurry sur, 442 ft from n and 330 ft from w line; J. T. Loden, 100, 7, D. Sanchez sur, 330 ft from e and 1014 ft from s line. Shell Pet. Corp., Dallas, H. Hampton, 169, 5, D. Ferguson sur, 1440 ft from w and 836 ft from s line; 4, 450 ft from s and 500 ft from w line; G. W. Richey, 176, 11, L. Rigsby sur, 990 ft from n and 795 ft from e line; J. S. Elder, A, 51, 4, M. Van Winkle sur, 330 ft from n and w lines.

GALVESTON COUNTY — Yount-Lee Oil Co., Beaumont, Fee, 23, 1, M. Dunman sur, 192 ft from e and 150 ft from s line; G. E. Smith, 200, 13, M. Dunman sur, 1500 ft from n and 1225 ft from e line.

GRAY COUNTY — Skelly Oil Co., Tulsa, Okla., G. H. Saunders, 160, 7, S 4, B 1, ACH&B sur, 360 ft from w and 330 ft from s li of sec.

GUADALUPE COUNTY—W. A. Scrutchin, Staples, S. J. Lowman, 10, 1, S 1, B 1, S. Barnes sur, 170 ft from n and 195 ft from w line.

HARDIN COUNTY — Republic Prod. Co., Houston, Arriola, 2, Arriola sur, east of Gulf No. 1.

HARRIS COUNTY — Sun Oil Co., Beaumont, R. L. Blaffer, 292, 62, R. Dunman sur, 155 ft n of No. 60. V. N. Ziveley, Houston, Warren, 30, 13, H. Ehrenherz sur, sw corner; 15, 150 ft ne of No. 13. Woods & Bennett, Humble, W. B. Fee, 2, 3, Jas. Strange sur, 100 ft w of No. 2.

ABBREVIATIONS

NOTE—The following is the explanation of abbreviations, signs, etc., used in completion and wildcat reports: *—dry hole, abandoned well; ‡—salt water; †—junked and abandoned; ¶—million feet of gas; abn—abandoned; bbls.—barrels; b.s.—basic sediment; cas—casing; co—cleaning out; dk—derrick; dr—drilling; fsh—fishing; ft—feet; in.—inches; lcn—location; m—milling; n, s, e, w—north, south, east, west; r—reaming; sd—shut down; sdtr—sidetracking; sp—spudding; sr—straight reaming; std—standardizing; sw—salt water; td—total depth; ur—underreaming; wo—workover; woc—waiting for cement to set; wosr—waiting on standard rig.

HOUSTON COUNTY — Murmac Drilling Corp., Houston, G. L. Murray, 1589, 1, Jno. Durst sur, 450 ft w of center of e line.

HOWARD COUNTY—Mid-Continent Pet. Corp., Tulsa, Okla., L. C. Denman, 80, 1, S10, B 30, T&P sur, 327 ft from n and 330 ft from e line.

JACK COUNTY—R. J. Brown, Henrietta, S. J. Christian, 100, 8, E. Smith sur, 300 ft s of No. 7. Louis Franklin et al, Wichita Falls, L. S. Wright, 60, 1, S. Brooks sur, 150 ft from n and e lines. McKee Drilling Co., Waco, J. T. Hunt, 160, 1, W. L. Britt sur, 1170 ft from n and e lines. Consolidated Oil Co., Wichita Falls, L. S. Wright, 160, 1, V. S. Brooks sur, 150 ft from n and w lines. W. W. Silk et al, Wichita Falls, N. B. Brown, 40, 1, B 28, R. Parker sur, 150 ft from n and e lines. McKee Drilling Co., Waco, J. T. Hunt, 100, 1, W. L. Brett sur, sw cor of ne¼ of ne¼. O. M. Wallace. Wichita Falls, J. G. Mullens, 40, 1, B 16, J. Robbins sur, 150 ft from n and w lines.

LIVE OAK COUNTY—C. J. Webster Oil & Gas Co., San Antonio, O. F. Akers, 300, 1, T. Henry sur, sw corner.

LA SALLE COUNTY—Interstate Oil Industries, Inc., Chicago, Ills., J. F. Mayes, 426, 1, B 20, I&GN sur, No. 19, 600 ft from s and w lines.

MONTGOMERY COUNTY—Humble Oil & Refg. Co., Houston, So. Tex. Dev., 22, T. Slade sur, 500 ft s of center of n line; 21, 833 ft e of No. 8. Navarro Oil Co., Houston, J. Rhoden, 19, 1, W. Strickland sur, 430 ft from e and 385 ft from n line. Standard Oil Co. of Kansas, Wichita, Kas., M. H. Alexander, 20, 1, J. McHorse sur, 330 ft from n and 363 ft from w line.

McMULLEN COUNTY—Lefevre & Ballard, San Antonio, L. Jacob, 320, 1, W. D. Benham sur, 1638 ft from ne and 1697 ft from se line. C. C. Sumway, San Antonio, Shiner, 1. New Shumway sur, 400 ft from w and 200 ft from n line of blk 45.

NUECES COUNTY—Titus & Callaway, Dallas, R. Morgan, 80, 1, No. 405 sur, 330 ft from s and e lines; K. Hutchins, 60, 1, B 30, H. B. Shepherd sur, 64 ft from e and 278 ft from s line; Perkins-Legasse, 41, 2, B 25, H. B. Shepherd sur, 330 ft e of center of w line; Perkins-Legasse, 39, 1, H. B. Shepherd sur, 330 ft from s and w lines of Blk. 26.

ORANGE COUNTY—E. L .Smith Oil Co., Mexia, Miller-Vidor, 640, 1, No. 3 J. W. Swisher sur, 750 ft from w and 200 ft from s line. Houston Oil Co., Houston, E. Hurst, 1, E. Hurst sur, 2000 ft from s and e lines of survey.

PECOS COUNTY — Aero Gas Refg. Co., Fort Stockton, L. L. Byrne, 13, 3, S 54, B 10, H&GN sur, 2430 ft from nw and 1485 ft from sw li sec.

PALO PINTO COUNTY — Brazos River Gas Co., Mineral Wells, W. T. McAvoy, 100, B1, E. G. Barnard sur, 350 ft from n and 575 ft from w line.

RUSK COUNTY—L. Hickman, Dallas, W. A. Hindman, 7, 2, W. W. Simms sur, 150 ft from n and w lines. H. C. Culp, Henderson, S. Clay, 5, 1, J. Ximinez sur, center. Ray White, Henderson, S. Clay, 5, 1. J. Ximinez sur, center. Shoreline Oil Co., Marshall, I. Brightwell, 10, 2, R. W. Smith sur, 377 ft e of No. 3; 3, 150 ft from n and 190 ft from w line. C. P. Oil Co., Henderson, Mayfield-Alford, 20, 4, J. Ximinez sur, 150 ft from s and e lines. Mortimer & Williams, Dallas, T. H. Goforth, 4, 1, E. Thompson sur, center. F. M. Brooks, Dallas, T. H. Goforth, 4, 1, E. Thompson sur, center. H. B. Evans, Waxahachie, T. H. Goforth, 4, 1, J. Lindley sur, 202 ft from n and 251 ft from e line. Dave Donoghue, Rec., Fort Worth, T. H. Goforth, 4, 1, J. Lindley sur, 202 ft from n and 250 ft from e line. Ward Oil Co., Ardmore, Okla., J. A. Beall, 369, 5, W. P. Chisum sur, 369 ft from w and 740 ft from s line. Horseshoe Lease Synd., Dallas, W. P. Brightwell, 4, 2, R. E. Winn sur, 150 ft from s and w lines. Iotex Oil Co., Marshall, Beall, 46, 2, P. W. Holmes sur, 330 ft from e and 310 ft from s line. Gilcrease Oil Co., Tulsa, Okla., D. Bradford, 40, 5, J. Ximinez sur, 250 ft s of center of n line. East Texas Oil Refg. Co., Dallas, A. Givens, 22, 4, R. E. Winn sur, 480 ft from n and 150 ft from ne line. Hunt Prod. Co., Tyler, V. E. Reid, 120, 6, T. J. Martin sur, 971 ft from n and 330 ft from e line. Texas Co., Shreveport, La., W. W. Henry, 229, 8, W. J. Roane sur, 761 ft w of No. 7; 7, 413 ft from e and 330 ft from s line; A. W. Kersh, 211, 9, E. B. Foulks sur, 330 ft from s and w lines; 10, 660 ft n of No. 9. Humble Oil & Refg. Co., Houston, J. T. Sexton, A, 137, 7, M. McCabe sur, 1320 ft e of No. 4. W. L. Price, 446, 24, J. M. Scott sur, 1690 ft from n and 990 ft from e line; J. W. Turner, 400, 12, J. M. Scott sur, 850 ft from n and 1320 ft from e line; 13, 1250 ft from w and 850 ft from s line; H. A. Piercy, A, 140, 7, T. J. Martin sur, 1700 ft from e and 700 ft from s line; J. R. Box, 182, 9, T. J. Martin sur, 330 ft from n and 700 ft from e line; R. E. L. Silvey, A, 240, 12, T. J. Martin sur, 400 ft from n and 550 ft from e line; M. E. Minor, 123, 5, Wm. Killen sur, 600 ft from n and 1200 ft from e line; A. R. Wooley, 55, 4, F. Cordova sur, 899 ft from n and 330 ft from e line. Mid-Kansas Oil & Gas Co., Shreveport, La., H. C. Burton, 254, 12, J. B. Cadena sur, 925 ft from n and 1600 ft from e line; M. M. Cross, 814, 49, J. B. Cadena sur, 530 ft from w and 934 ft from s line; 48, 445 ft from w and 1650 ft from s line. Sun Oil Co., Dallas, O. W. Knight, 264, 13, D. Collins sur, 1170 ft from e and 1700 ft from s line. Gulf Prod. Co., Houston, H. Baton, 56, 1, M. Cogswell sur, 330 ft from n and 1210 ft from e line; W. Oten, 48, 1, M. McCabe sur, 330 ft from s and w lines. Tidal Oil Co., Kilgore, J. M. Shaw, 85, 7, E. Collard sur, 330 ft from w and 1684 ft from n line; J. S. Bean, 128, 10, J. Lewis sur, 330 ft from w and 410 ft from n line.

SMITH COUNTY—Mid-Kansas Oil & Gas Co., Shreveport, La., J. H. Sharp, 482, 9, M. S. Coy sur, 826 ft w of No. 8; 16, 990 ft from n and 4077 ft from e line; 17, 660 ft w of No. 16.

SHACKLEFORD COUNTY—L. B. Tannehill, Albany, W. P. Newell, 409, 32, S 11, B 11, T&P sur, 450 ft from s and e lines.

TRINITY COUNTY—H. S. Chancey, Trinity, J. B. Gibson, 200, 1, Wm. Beardsley sur, 600 ft from n and 150 ft from e line.

UPSHUR COUNTY — Feazel-Davenport Corp., Dallas, W. M. Phillips, 71, 5, H. H. Edwards sur, 660 ft e of No. 4. F. W. Maddox, Pittsburgh, D. A. Fleet, 1, 1, C. H. Cooper sur, 105 ft from n and e lines. Wadley, Evans & Lyons, Shreveport, La., W. S. Jones, 100, 1, J. M. Dunn sur, 330 ft from s and 437 ft from e line. Simms Oil Co., Dallas, J. J. Flewellen, B, 21, M. Mann sur, 415 ft from n and 5970 ft from e line; 22, 1330 ft from w

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and 330 ft from n line; J. J. Flewellen, 210, 9, M. Mann sur, 400 ft from n and 2310 ft from w line; 10, 415 ft from s and 4290 ft from w line. Humble Oil & Refg. Co., Houston, G. W. Johnson, 102, 8, G. W. Hooper sur, 330 ft from n and 1014 ft from e line.

UVALDE COUNTY—J. V. Scoggins, Dallas, Fee, 259, 1, B 471, Kilgore sur, 1100 ft from n and e lines.

VAN ZANDT COUNTY — Pure Oil Co., Fort Worth, R. L. Wells, 54, 3, H. V. Moore sur, 250 ft from n and w lines; A. R. Humphreys, 100, 4, A. McPhail sur, 225 ft from n and 1125 ft from e line; J. E. Cumbie, 23, 2, J. Walling sur, 328 ft from e and 250 ft from s line.

VICTORIA COUNTY — Houston Oil Co., Houston, W. T. Beck, 853, 1, I. Ry. No. 26 sur, 600 ft from n and 1000 ft from w line. Union Oil Co., Abilene, C. N. Keeran, 5000, 2, M. DeLeon sur, 660 ft from n and w lines.

WICHITA COUNTY—P. J. Flynn, Electra, G. L. Woodard, 40, 3, B 248, Wag. Col. sur, 1050 ft from e and 750 ft from s line. Rathke Oil Co., Wichita Falls, Fee, 40, 1, B 20, DCSL sur No. 4, 150 ft from n and w lines. J. H. Howell, Wichita Falls, E. E. Goetze, 24, 1, GC&SF sur, 150 ft from n and w lines. F. L. Pinkston, Burkburnett, C. Denny, 60, 7, H. B. Balch sur, 1085 ft from n and 462 ft from w line. E. J. Stump et al, Wichita Falls, W. L. Hodges, 20, 2, Wm. Spillers sur, 150 ft from s and w lines. Chapman & Parker, Wichita Falls, C. W. Parker, 40, 3, B 24, PPCSL sur, 800 ft from e and 150 ft from s line. H. H. Spencer, Burkburnett, J. N. George, 60, 9, J. Walschmidt sur, 774 ft from n and 533 ft from e line.

WARD COUNTY—Bundy Corp., San Angelo, J. B. Bennett, 160, 1, S 16, B 34, H&TC sur, 330 ft from n and e lines. Stanley A, Thompson, Fort Worth, W. D. Johnson, 40, 1, S 9, B 34, H&TC sur, 330 ft from n and w lines of s½. Abell Bros., Midland, F. G. Smith, 320, 4, S 4, B 34, H&TC sur, 990 ft from sw and 285 ft from ne line; S. F. Hayslett, 270, 1, S 3, B 5, H&TC sur, 1650 ft from n and 1320 ft from w li of sec.

WASHINGTON COUNTY — Sun Oil Co., Dallas, A. Schulte, 7½, 1, J. F. Perry sur, 203 ft from ne and 300 ft from se line.

WEBB COUNTY—B. Rosenburg, Laredo, M. Vela, 520, 1, Sec. 267 sur, 479 ft from n and 491 ft from w li Blk. 4.

WILBARGER COUNTY — Texas Co., Wichita Falls, W. T. Waggoner, A406, S 7, B 13, H&TC sur, 938 ft from e and 990 ft from s line.

YOUNG COUNTY—W. R. Stafford, et al, Graham, A. C. Casey, 200, 1, 1494 TE&L sur, 1380 ft from n and 150 ft from w li sec. Mook-Texas Oil Co., Fort Worth, R. Bullock, 40, 1, 61 TE&L sur, 160 ft from w and 760 ft from s line. Iron Mountain Oil Co., Fort Worth, E. P. Tatum, 185, 13, 1908 TE&L sur, 750 ft from n and 1493 ft from e line. Stuckey & Sparks, Olney, G. B. Hamilton, 80, 2, 3401 TE&L sur, 450 ft e of center of w line. R. Bruton, Hale Center, S. H. Jones, 40, 1, B1, BS&F sur, 750 ft from n and 150 ft from w line. Mel Armstrong, Graham, D. M. Spearman, 53, 1, S. Sallee sur, 150 ft s of center of n line. Willis & Brazelton Bros., Jean, M. W. Sewell, 40, 1, 1911, TE&L sur, 150 ft from s and w lines. W. R. Fullerton, Wichita Falls, Kirkland, 40, 7, 2250 TE&L sur, 450 ft from n and 1050 ft from e line. King Royalty Co., Wichita Falls, J. B. Daniels, 40, 8, 164 TE&L sur, 465 ft from n and 150 ft from w line. B. C. Gilmore, Markley, Speer, 80, 1, W. Stoneman sur, 450 ft from n and 300 ft from e line. Iron Mountain Oil Co., Fort Worth, E. P. Tatum, 185, 11, 1908 TE&L sur, 300 ft sw of No. 9; 12, 150 ft from n and 1419 ft from e line. Hinson & Tidwell & Phillips Pet. Co., Graham, W. L. Newby, 80, 2, S 29, S. M. Oldham sur, 160 ft from n and e lines. Wooten & Reed et al, Graham, Y. Swain, 50, 4, 1465 TE&L sur, 450 ft from s and e lines. Sams & Watson, Markley, Texas, F. O. Loftin, 80, 2, J. T. Bussey sur, 300 ft w of No. 1. Texas Co., Wichita Falls, E. C. Keith, 40, 1, 267 TE&L sur, 490 ft from w and 150 ft from s line. United Prod. Corp., Wichita Falls, J. F. Larimore, 41, 6, 2246 TE&L sur, 300 ft w of No. 1. E. R. Riggs, Graham, S. P. Taylor, 265, 1, 1965 TE&L sur, 150 ft from e and 1135 ft from n line. R. C. Parker, Graham, E. Blount, 71, 1, 2692 TE&L sur, 870 ft from s and 2000 ft from e line.

NORTH and WEST TEXAS

Gray County Well Makes Initial Showing of 6025 Barrels on 24-Hour Test

H. H. KING, *Staff Representative, Fort Worth, Texas*

Skelly Gets Unusually Good Well in LeFors Pool

Pampa, Texas.—The Lefors pool, Gray County, yielded an exceptionally prolific well when Skelly Oil Company's G. H. Saunders 6 gauged 6025 barrels of high gravity oil on 24-hour test while partly pinched, and then cut back to 200 barrels hourly. This well is producing from the granite wash formation logged at 2657-2718 feet, with a surface elevation of 2767 feet. It is located in SEc SW Section 4, Block 1, ACH&B survey, and an east offset to a 2600-barrel producer completed last month by the company. Saunders 6 flowed at rate of 330 barrels hourly for a period, and the gas production is estimated at 5,000,000 cubic feet daily. The Texas Company's Jim Williams 12, a south offset to the above big producer, was flowing 50 barrels of oil hourly while drilling in granite wash formation at 2685-2715 feet, with a surface elevation of 2764 feet.

Magnolia Petroleum Company's Fee 6, lease 227, an east offset to a 940-barrel producer completed by Mazda Oil Corporation (Julius Livingston) in July, and a northeast offset to a similar size well scored last month by Sun Oil Company in the northeast end of the Finley-Brown pool, Gray County, failed to develop oil or gas production after drilling to 3240 feet, or 258 feet below sea level. This apparent failure is located 660 feet out of the southwest corner of the north half of Section 14, Block 3, I&GN Ry. survey. The two nearby wells were completed at total depths of 2993 and 2985 feet, respectively. Regardless of the outcome of Fee 6, Magnolia Petroleum Company intends to proceed with drilling Fee 7, a south offset.

Bowers-Jackson

The dolomite lime oil and gas horizon found south of the Bowers-Jackson pool, Gray County, has a new well in process of completion through the efforts of The Texas Company's Wm. Jackson 2, which is flowing about 30 barrels of oil and 2,000,000 cubic feet of gas daily from lime at 2990-94 feet, and drilling ahead without increase at 3055 feet. This well is in SEc SE Section 94, Block B-2, I&GN Ry. survey, and is a west offset to a 140-barrel pumper completed in July from the lime by Saulsbury and associates.

North and West Texas Field Developments

Completions

TEXAS PANHANDLE

Company, Well and Location	Initial Production Bbls.	Depth
CARSON COUNTY—		
Skelly Oil Co., Henry Schafer (East) 13	530	3230
Texoma Nat'l Gas Co., S. B. Burnett-Gulf 2-G	¶20½	2631
GRAY COUNTY—		
Kewanee O&G Co., J. S. Morse-Adams 1-C	25	2570
The Texas Co., Cook-Faulkmer 10-B	350	2940
Tripplehorn Bros., et al, H. B. Lovett 1	*	3081
MOORE COUNTY—		
Shamrock O&G Co., W. W. Burnett-Gulf 1	†	2984

NORTH TEXAS

ARCHER COUNTY—		
Bobby Burns & Long, Wilson-Gulf 2-T	150	2217
Morris & Dunn, Veazy 1	*	1254
Schultz & Weaver, Green 10	50	1162
CLAY COUNTY—		
Block Nine Oil Co., Reid 18	*	1021
COOKE COUNTY—		
Walter D. Cline et al, Clayton 2	20	1039
WICHITA COUNTY—		
Mogren & Anderson, Goetze 29	25	906
S. H. Walton et al, Gulf P.L. Co. 2	*	608
YOUNG COUNTY—		
B. C. Gilmore et al, Spear 1	*	625
King Royalty Co., Daniels 8, Sec. 165	*	905
E. R. Riggs et al, Taylor 1, Sec. 1965	*	305
The Texas Co., Keith 1, Sec. 267	125	728
Ed. Willis et al, Weems 1, Sec. 1911	*	665

WEST CENTRAL TEXAS

CALLAHAN COUNTY—		
Matson Drl. Co., Radford 1	*	411
COLEMAN COUNTY—		
Brown et al, Edmondson 1	*	1805
EASTLAND COUNTY—		
Arab Gasoline Co., I. N. Hart 1	¶4	2042
Texas Pacific Coal & Oil Co., Fee 9, (Durocher Sur)	100	2987
Geo. Wilkins et al, Mrs. O. C. Holcomb 1	¶¼	1043
PALO PINTO COUNTY—		
Brazos River O&G Co., Bridges 2	*	1775
PARKER COUNTY—		
Delatross-Scott et al, Goen 1	*	905
SHACKELFORD COUNTY—		
J. A. Bearman et al, J. B. Mathews 1	*	1066
C. S. Brewer et al, E. A. Jeter 2	10	900
Hyde & James, Morris-Buie 1	15	1598
Tannihill Oil Co., W. P. Newell 31	10	964
L. Warren et al, Smith 2	*	835

WEST TEXAS

GLASSCOCK COUNTY—		
Tribal Oil Co., M. M. Edwards 2	1500	2110
WINKLER COUNTY—		
Sid Richardson et al, W. F. Scarborough-Gulf 1	5000	2875
COKE COUNTY—		
Mid-Kansas O&G Co., C. J. Henry 1	*	4007

SOUTH TEXAS

Two More Tries for Deep Production in Victoria County; Frio County Test Will Go to 9,000 Feet.

EARL POST, *Staff Representative, San Antonio*

Tuleta Field Hopes Raised By New Showings

San Antonio, Texas.—Hopes for the Tuleta field, Bee County, were revived during the week by the showing of C. F. Nichols' J. P. Harris 3, Block 10, which showed for a probable good producer 10 feet in the sand at 4114 feet. It is south of The Texas Company's Cox 1 gasser and southwest a few hundred feet from the discovery well.

The well topped the sand at 4104 feet and drilled to 4114 feet, where two drill stem tests were made, both showing about 75 pounds pressure with no oil in two minutes. The tester later was lowered to 4108, taking a test of the remaining six feet of sand. In several minutes it showed four fourbles of oil and registered 650 pounds pressure. Casing is being set into the sand. The special interest is that the wells show as much as 50 feet or more of sand and this test was made from only a six-foot section of it.

Also, The Texas Company's Cox well several days ago showed some 62 gravity oil. Being allowed to flow, it increased to around 60 barrels daily and still climbing.

One new completion was reported. It was C R & M Drilling Company and O'Neill's J. P. Harris 1-A, in the northeast corner of Block 8, Section 2, northeast of the discovery well, which is making about 125 barrels from 4091-95 feet.

North Pettus also figured in the completions. R. A. McKinney 5 of the Gulf Coast Oil Company, 500 feet northeast of McKinney 4, came in from several feet in the sand topped at 3680 feet. It made 50 barrels or so when drilled in, but after the tubing was re-run, it was recompleted for around 150 barrels.

Two Locations Made for Deep Victoria County Tests

San Antonio, Texas.—Two more locations have been made in Victoria County for deep wildcats. Houston Oil Company et al's Beck 2, lot D, IRR No. 26 survey, is building derrick. It is on the Beck salt dome that this company has been attempting to prove productive for the past several years, but has encountered hard luck through heaving shale. The company's A. M. McFadden 1-A, IRR No. 20 survey, was given up recently at 6480 feet due to the shale.

Union Oil Company of Nevada is moving in machinery for Keeran 2, located 500 feet east of the west line and 1900 feet north of the railroad. It is about 1¼ miles east and slightly north of the Victoria Oil Company's Keeran 1, which is the only oil producer in the field. Union 1 was recently abandoned at exactly 7000 feet.

The Texas Company's A. M. McFadden 3, J. M. Rine survey, has been drilled to approximately 7000 feet, where it probably will be abandoned. Slick-Seeligson Company's A. M. McFadden 2, J. Varin survey, is down 5402 feet and still drilling, while Humble Oil & Refining Company's Peter Rydolph 1, Kemper survey, is drilling at 6390 feet.

Across the line in Refugio County, Humble Oil & Refining Company's O'Conner 3, is drilling around 1000 feet. It is in the F. Rios survey.

Make Second Test of Sand Showing Oil in Jim Hogg

San Antonio, Texas.—Jack A. Tarver and associates are attempting to establish a new oil pool in Jim Hogg County on a 6000-acre block. Martinez 1, Survey 623, cored a sand at 3000-7 feet which showed saturation and a drill stem test was attempted. It failed, however, and a second is being attempted.

The location is 300 feet to the east and 1600 feet to the north line of the survey.

Saxet Drilling Campaign Given Decided Boost

San Antonio, Texas.—Increased drilling for the Saxet field, Nueces County, is assured following announcement of more locations during the week. Titus and Calloway, of Dallas, plan to drill four wells immediately, while William F. Morgan interests also plan an extensive campaign.

Gulf Coast Oil Company's Perkins & LeGasse 2, Section 26, is a completion from 4887 feet, but the initial production is not reported. It has casing set at 4875 feet.

Gulf Port Oil Company's Frank Bliss 2, Section 406, looks like a probable large producer, showing 12 fourbles of oil in a 15-minute drill stem test from a sand topped at 4759 feet. The same company's Dinn 1, also in the field, is drilling below 4500 feet.

Houston Oil Company has spudded W. W. Walton 1, Section 9, and Saxet Gas Company is rigging J. Dunn 9, E. Villereal survey.

Oso Drilling Company is still waiting on casing for Roark 3, Villereal survey, which showed eight fourbles of oil on a drill stem test from 4862-67 feet.

Titus and Calloway are building derricks for Perkins and LeGasse 1 and 2 and have made locations for Rand Morgan 1 and Hutchins 1.

Several wildcats are being drilled in the vicinity of the field, but have not reached interesting stages.

North Government North End Proving Important

San Antonio, Texas.—The northern trend of the North Government Wells field, Duval County, is proving of greater importance than the section around the Rosita townsite. This is indicated by the high initial production of the new wells being completed.

The Texas Company's M. B. Johnson 1, 330 feet out of SEc NE SW Section 42, is estimated upward of 3000 barrels from 2234-63 feet. It has an elevation of 519 feet. It is a due west offset to Hamill Drilling Company's C. W. Hahl 1, which recently extended the field northward.

Magnolia Petroleum Company completed the south offset to the Hamill well in J. V. Allen 1, which flowed at the rate of 30 barrels an hour on choke from 2282 feet.

In South Government Wells, two producers were reported. Humble Oil & Refining Company's Paul White 7, Section 58, extended the pool slightly to the north when it showed 840 barrels initial through a 35-65 choke from 2294-2306 feet. Thomas & Tarver, Inc., completed Bishop Cattle Company 7 from 2335 feet for 500 barrels. It is in Section 135.

Farther south, at the southern end of the Sarnosa pool, La Jita Corporation (John F. Camp) scored a dry hole from 2601 feet. It is Weil 2, Section 570. At 2361-72 feet, it showed gas. Cored deeper to 2375 feet, it showed oil, but developed 1200 feet of salt water on a 25 minute drill stem test.

The new proration order for the Government Wells district cut the production in the old field and the south extension 25 per cent from 200 barrels per well to 150 barrels. Sarnosa and North Government Wells remain on a unit acreage scale with a base allowable of 40 barrels per well. One through four acres are allowed six barrels per acre additional; five through nine, seven barrels per acre additional; 10 through 20 acres, eight barrels additional per acre. This means that 20-acre units will be allowed

200 barrels. To date, however, the units have been 10 acres or less, the new order creating the first 20-acre unit allowances. Formerly the top was 150 barrels per well with a maximum allowance for 10 acres. This will be reduced to 120 barrels. It is possible that the northern end of the pool where development is just starting will make some sort of agreement increasing the units to 20 acres to participate in this increased allowable per well.

Two Karnes County Tests Assured by Lease Deal

San Antonio, Texas.—Two wells to the Pettus horizon on the Humble Oil & Refining Company's Green block in Karnes County will result from a deal just completed by Fred Adams, George Lyles and H. J. Porter. The locations are to be made by Humble Oil & Refining Company which holds the majority of the acreage in the area.

The first well is to be 1500 feet from the east line and 300 feet from the south line of the Mrs. A. E. Ingram 275-acre tract in the Carlos Martinez tract. It is about one mile northwest of Fort Bend Oil Company's Newberry 1, which showed for a gasser spraying a little oil in the Pettus above 3000 feet several years ago.

Ellsworth Gray, president, Gray Specialty Company, Houston, announces the changing of the name of his company to Saxet Tool Company.

Alta Vista Field Well Makes 12 Million Gas

San Antonio, Texas.—Ed A. East's Garcia 2, Alta Vista field, Brooks County, is a 12,000,000 cubic foot gasser from 1160-65 feet. It is 150 feet from the west line and 1600 feet from the south line of the 2162-acre tract in the La Encantada survey.

Frio County Test Will Go To 9000 Feet If Required

San Antonio, Texas.—Amerada Petroleum Corporation's Halff and Oppenheimer 1, 12 miles southwest of Pearsall in Frio County, is attracting much attention and is one of the most outstanding drilling operations in the San Antonio district. With its heavy equipment, it is headed for production as deep as 9000 feet if not found at a shallower depth.

The well on October 12 tested a sand at 4110-63 feet, which made considerable gas and salt water and is being drilled ahead.

It is located 1200 feet from the north and 200 feet from the east line of the W. F. Halsel survey.

This well was located following several years of leasing and research work, including extensive geophysical and geological study. It is in a solid block comprising 85,000 acres.

South Texas Field Developments

Completions

Company, Well and Location	Initial Production Bbls.	Depth
BASTROP COUNTY—		
Marts & Beavens, Sloop Estate 1, J. Burleson sur	*	2230
BEE COUNTY—		
Gulf Coast Oil Co., McKinney 5, Ballard sur, N. Pettus	150	3692
O'Neill & CR & M Dr. Co., J. P. Harris 1-A, blk 8, sec 2, Tuleta	125	4095
BEXAR COUNTY—		
Alamo Nat'l Gas Co., G. J. Gembler 4, No. 51 A, Menchaca sur, Eckert, dropped	*	730
Moore & Jauer, Holly Ellison 1, T. York sur	*	2170
BROOKS COUNTY—		
Ed A. East, A. Garcia 2, La Encantada sur, Alta Vista	¶12	1165
DUVAL COUNTY—		
Humble O&R Co., Paul White 7, sec 58, Gov't Wells, 35-65 choke	840	2306
La Jita Corp., Weil 2, sec 570, Sarnosa	*	2601
Mag. Pet. Co., J. V. Allen 1, sec 42, N. Gov't Wells	720	2282
Texas Co., M. B. Johnson 1, sec 42, N. Gov't Wells	3000	2263
Thomas & Tarver, Inc., Bishop 7, sec 135, S. Gov't Wells	500	2335
GONZALES COUNTY—		
Luling O&G Co., DuBose 1, F. R. Whitner sur	*	3529
MILAM COUNTY—		
Keyser & Roberts, Ward 3, Levi Taylor sur	*	1343
REFUGIO COUNTY—		
T. P. Morgan et al, M. F. Lambert 2, lots 3-4, blk m, Refugio	*	5949
STARR COUNTY—		
Hoffman & Flowers, Goodrich 1, blk 6, tract 5, por 80-81	*	1490
Hooks & Weaver, Kelsey Bass 13, sec 8, Los Olmos	*	487
TRAVIS COUNTY—		
Ray & Orth, Lundgren 1, L. Kimbro sur	*	787
VICTORIA COUNTY—		
Houston Oil Co. et al, A. M. McFadden 1-A, Irr sur No. 20, Beck area	*	6480
WEBB COUNTY—		
French Oil Corp., S. Benavides 1, sur 696	*	2495
Tompkins & Edwards, Ortiz 1, sec 1808, dropped	*	960
WILLIAMSON COUNTY—		
McNeill & Orth, Joe Littleton 1, H. Good sur	*	1520
Burns et al's E. G. Edge 1, Simon Miller sur	*	2320
ZAPATA COUNTY—		
The Texas Co., Jennings 13, Cerrito Blanco grant, Escobas	55	1188

Wildcat Drilling Report

(Wells shut down not included)

ATASCOSA COUNTY—T. W. Callahan's W. A. Blackwell 1, blk 49, J. Houlihan sur, 2 mi n Whitsett, coring sand 909 ft.

BANDERA COUNTY—E. A. Parkford et al's Duke 1, Sec. 7, GH&SA sur, move in cable tools.

BASTROP COUNTY—Gant & Teas' Mikulec 1, William Barton sur, 4 mi sw Smithville, dk. Marts & Beavens' Sloop Estate 2, J. Burleson sur, near Elgin, skid dk.

BEE COUNTY—Gulf Coast Oil Co.'s Hicks-Hall 5, blk 2, Uranga sur, Normanna, dk. C. F. Nichols' J. Harris 3, Uranga Grant, blk 10, Tuleta, sand 4104-14 ft, tester set 4108 ft, show 4 fourbles oil, 250 lbs. pressure, setting cas. Nichols & Bruner's Hedefels 1, John Ryan sur, 3½ mi se Beeville, sd 2100 ft for fuel. O'Neill & CR&M Drlg. Co.'s J. P. Harris 1-A, nw cor blk 8, No. 2 Harris sur, sand 4091-95 ft, completing. J. S. Smith's Weiss 1, J. M. Uranga sur, blk 1, sand 4446-53 ft, dry, dr ahead. Southwest Drlg. Co.'s Riggs 1, James Nowland sur, 6½ mi w Skidmore, lcn.

BEXAR COUNTY — Wm. Ballard's S. A. Land & Dev. Co., I. Perez sur, dr 970 ft. Robert C. Hill's Schell 1, sec 234, Perretaux sur, reaming 813 ft. R. V. Hill's Boeck 1, J. F. Shepherd sur, sec 314, re-dr 150 ft. F. E. Kistler's E. E. Pirie 1, No. 7, M. Gotari sur, testing 1364 ft.

CALDWELL COUNTY — Bobrose O&R Co.'s Walker 2-B, S. Seal sur, Dunlap area, shot 120 qts 2255 ft, now sd for orders. Hickman, Hill et al's Dickerson 1, John D. Rains sur, deepening from 2175 ft.

COLORADO COUNTY — C. B. Bunte et al's Rudolph Matuska 1, J. Hennecke sur, dr 3900 ft.

COMAL COUNTY—Caldwell & Lanier's T. J. Byler 1, HE&WT sur, Sec. 894, re-dr 887 ft.

DIMMIT COUNTY—Mores-Campbell Co.'s Denton 1, tract 33-34, Blk. 60, Denton Colony sub, 12 mi sw Carrizo Spgs., dr 1032 ft.

DUVAL COUNTY—J. M. Anderson et al's Welder & Wood 1, sec 71, 2 mi e and n Gov't. Wells, dr 1320 ft. A. L. Buchanan et al's Foster 1, w Hagist well, lcn. Buchanan & Port Isabel O&G Co.'s Duval Ranch (Sun) 1, sec. 96, ru. R. B. Byrd et al's P. T. Wright 1, Sec. 101, lcn. Central Producers, Inc.'s, Tuck & Johnson 3, sec 42, N Gov't Wells, ru; H. Wendt 1, sec 43, N. Gov't Wells dr 2000 ft. DeLange & Frates' Sevier 1, sur 213, 13 mi e Gov't Wells, dr 3660 ft. Duggan & Smith's Sutherland 2, sur 511, dr below 600 ft. Hamill Drlg. Co.'s C. W. Hahl 2, sec 42, sp. Highland Oil Co.'s A. Lundvall 2, sec 42, sp. Humble O&R Co.'s Paul White 7, sec 58, Gov't Wells, sand 2294-2303 ft, completing. W. P. Luse et al's C. W. Hahl 1, sec 45, N. Gov't Wells, move on. Magnolia Pet. Co.'s J. T. Johnson 4, sec 44, completing 2305 ft; J. T. Johnson 5, sec 44, move on; J. V. Allen 2, sec 42, prep to move on; G. Wendt 9, sec 44, dr abt. 100 ft; Wendt 10, sec 44, lcn. Plymouth Oil Co.'s Hoffman 1, sur 113, 5 mi e Sarnosa, dr 200 ft. San Diego Oil Co.'s O. Bennett 3, sec 44, top sand 2298 ft, set cas, woc. Smith et al's Peters 1, sec 178, dr below 1750 ft. Southwest Drlg. Co.'s R. Wendt 4, sec 43, to move on. S. R. C. Oil Corp.'s Duval Ranch 1, sec 192, lcn. Sun Oil Co.'s Duval Ranch 1, DI&A sur No. 78, 4 mi ne Gov't Wells, sp. Texas Co.'s C. W. Freer 1, sec. 45, lcn; R. L. Brown 1, sec 574, no rept; M. B. Johnson 2, sec 42, ru; M. B. Johnson 3, sec 42, lcn; Bishop Cattle Co. 5, sec 135, Gov't Wells, move on. Whisenant-Trenchard-French's C. W. Hahl 3, sec 44, lcn (last rept. error—No. 4 drilled before No. 3).

FRIO COUNTY — Amerada Pet. Corp.'s Halff & Oppenheimer 1, W. F. Halsell sur, 12 mi sw Pearsall, sand 4110-63 ft, test sw on dst, dr ahead.

GOLIAD COUNTY—T. B. Slick Estate's J. R. Kauffman 2, tract 13, Trevino sur, No. 45, dr 2650 ft. Slick-Seeligson, Inc.'s, Poetter 2, 1200 ft sw No. 1, Slick pool, dk.

GONZALES COUNTY—E. Haenel, Jr.'s J. James 1-A, M. A. Williams sur, lcn. Kirby Petroleum Co. et al's Bouldin & Lum 1, Russell Ward sur, dk.

GUADALUPE COUNTY — Marshall Eskridge, Trustee's, Behring 2, G. W. Williams sur, attempt to set cas below 2000 ft. J. T.

Stover et al's P. A. Hoffman 1, J. C. King sur, 1 mi sw Salmar, fsh 1892 ft. H. A. Suttle's O. J. Halm 1, J. Kent sur, 2½ mi nw Sal-Mar, dr 1876 ft, apparently cutting fault. F. W. Tong et al's Henry Ray 1, Mose Baker sur, between McQueeny & Marion, ru. A. W. Wormser's F. Hempel 1, G. W. Williams sur, Sal-Mar, sd 2250 ft for fuel.

JIM HOGG COUNTY—Jack A. Tarver's Martinez 1, sur 623, sand 3000-7 ft, showing gas and oil, wait on fuel for test.

JIM WELLS COUNTY—Campbell & Parker's N. A. Hoffman 1, T. Morena sur, Stanolind Block, dr 3170 ft. F. A. Lain et al's Vernon Porter 1, tract 25, dr 1650 ft. Larcro Gas & Pet. Co.'s W. D. Wade 3, Sec. D, W. H. Bode sur, lcn. J. E. Walsh et al's W. D. Wade 1, blk B, Allen sur, lot 2, set surf cas, woc.

KARNES COUNTY—Adams, Lyles, Porter & Humble O. & R. Co.'s A. E. Ingram 1, Carloa Martinez sur, lcn.

KERR COUNTY—L. L. Evans et al's Jeff Love 2-B, lcn.

LIVE OAK COUNTY — Brown & Whitting's A, Lasater 1, Stephen Hays sur, 2½ mi w Whitsett, dr 719 ft sticky shale. J. H. Durkin et al's Marbach 1, Stephen Hays sur, td 910 ft (new depth), shut down for cas. Live Oak Pet. Co.'s Jim Harper 1, J. Pointavent sur, between Whitsett and Fant City, sand 1099-1100 ft, show saturation, to core deeper and set cas.

McMullen County—Jacob, Buzzini & Pickett, Inc.'s, Jacob 7-A, W. H. Jacob sur No. 10, Jacob pool, dr 400 ft. Longhorn Oil Co. & American Gas Co.'s Lark 1, E. W. B. Scrugham sur, near Live Oak line, Jacob pool, td 1026 ft, set liner, stnd 100 ft mud and oil, install sand pump. V. G. Schimmel's Two Rivers Ranch Co. 2, sec 59, Two Rivers Ranch sur, set cas 773 ft, dr in. Skinner & Bailey's F. H. Burmeister 1, blk 1, GH&H sur, sec 14, ru.

MEDINA COUNTY—James E. Greenlee's F. Fasseler 1, sec 799, L. G. Harrison sur, sp. T. A. Ryal's G. Martin 1, No. 368 Henry Castro sur, 12 mi se Hondo, dr 100 ft. W. L. Umburn's P. Jingman a, N. B. Rogers sur, lcn. Robert M. Yantis' Adams 1-A, Fred Mumme sur, dr below 200 ft.

MILAM COUNTY—M. W. Eiser's Citizens National Bank 1, blk 368, William Punchard sur, dr 2095 ft Georgetown.

NUECES COUNTY—Gulf Coast Oil Co.'s Perkins & LeGasse 2, Shepherd Farms sub, sec 26, td 2887 ft, top sand 4875 ft, swab in. Gulf Port Oil Co.'s Frank Bliss 2, sec 406, sand 4769 ft, test 19 fourbles oil, set cas; Dinn 1, Saxet, dr 4391 ft; John M. Luby 1, sec 2, A. Collins sur, 25 mi sw Corpus Christi, dr 1100 ft. Houston Oil Co.'s W. W. Walton 1, Rge. 6, Sec. 9, Saxet, ru. Carter Kelly et al's Hearny 1, 4 mi nw Saxet field, dk. Oso Drlg. Co., Inc.'s, N. J. Roark 3, E. Villareal sur, sand 4862-67 ft, show 8 fourbles oil 12 min, sd for cas. Saxet Gas Co.'s J. Dunn 9, E. Villereal sur, Saxet, bldg dk. Titus & Calloway's Perkins & LeGasse 1, Saxet, dk; Perkins & LeGasse 2, Saxet, dk; Rand Morgan 1, Saxet, lcn; Hutchins 1, Saxet, lcn.

REFUGIO COUNTY—Humble O&R Co.'s O'Conner 3, F. Rios sur, dr 200 ft.

SAN PATRICIO COUNTY—Chiltipin O&G Co.'s E. H. Welder 1, blk 5, E. Portillo sur, Welder field, lcn.

UVALDE COUNTY—J. V. Scroggins et al's Mrs. Oliver Henry 1, Hughes-Kilgore sur, 6 mi nw Sabinal, ru.

VICTORIA COUNTY—Houston Oil Co.'s A. M. McFadden 1-A, IRR Sur. No 20, heaving shale 6480 ft; Beck 2, Beck Salt Dome, lcn being made. Humble O&R Co.'s P. Rydolph, Kemper sur, McFadden area, sand 6240-50 ft, test 5200 ft sw, dr ahead. Slick-Seeligson, Inc.'s, McFadden 2, J. Varin sur, dr 5335 ft. Texas Co.'s A. M. McFadden 3, J. M. Rine sur, dr 6913 ft. Union Oil Corp. of Nevada's Keeran 1, M. de Leon sur, moving on.

WEBB COUNTY—O. W. Killam's Garcia 1, blk 2, sur 461, dr 1771 ft. South Texas Oil Co.'s Laurel 1, sec 270, ru.

GULF COASTAL FIELDS

Conroe Has 37 Operations; Spurger Test Gas to Drill Second Location; Polk County Wildcat Showing Gas.

WM. V. GROSS, *Staff Representative, Houston, Texas*

Additional Curtailment To Be Needed at Conroe

Houston.—It is apparent that Conroe field, Montgomery County, will have to be subjected to further curtailment of production by the Texas Railroad Commission if the area is to be held down to a figure anywhere near the 13,500 barrels daily average credited to it by the latest production estimates of the American Petroleum Institute.

Five out of the last six completions in the field, all occurring within the past 10 days, have been producers. Their aggregate initial yield was 7170 barrels—or an average of 1434 barrels per well. The sixth completion was a two million cubic foot gas well which will be used to furnish fuel for drilling additional tests projected by Humble Oil & Refining Company, unless a decision to work-over and try for oil production is made.

October 14 the field had 37 operations. Of these 23 were drilling wells, several of which are on the sand and due for completion in a fortnight; two were rigs; two were locations, and 10 were derricks. Such a condition presages continued activity throughout the remainder of the year, with a possibility of the field entering 1932 with more activity than it has ever known.

One well completed too late in the week to appear in the completion column of detail carried elsewhere on this page was Humble Oil & Refining Company's Cartwright A-4, having an initial production of 75 barrels per hour through a half-inch choke. The well was drilled to 5180 feet, and it has a casing pressure of 720 pounds.

Valuable Producer Brought In at East Hackberry Pool

Houston.—A valuable producer was added to East Hackberry field, Cameron Parish, Louisiana, this week when Union Sulphur Company brought in Humble 3 for an initial production of 1392 barrels at 6003 feet.

Humble 1, another Union Sulphur Company well on the same lease was completed in the 6000-foot sand March 10 for an initial estimated at 1500 barrels. The well has produced consistently since then, and has gradually increased in output to 1525 barrels of pipe line oil per day. This production is coming through a three-eighths-inch choke, the same size as that used to bring in No. 3.

Humble 3 is producing 30.7 gravity oil and carries a pressure of 1240 pounds on the tubing. Twenty-six feet of 4¼-inch screen were set in the sand.

East Hackberry field was producing 4000 barrels per day prior to completion of this well, and in view of active drilling now going on in the field, it may be expected to show an increase above the 4000-barrel figure before the close of the year.

First Completion in Months At Raccoon Bend

Houston.—Raccoon Bend field, Fort Bend County, completed the first well in several months October 14 when Humble Oil & Refining Company's J. W. Wilson 5 was brought in for 1200 barrels of pipe line oil from 3208 feet. The oil is flowing through a three quarter-inch choke; pressure on the tubing is 250 pounds, that on the casing is 600 pounds. Production is coming from a sand in which 43 feet five inches of screen was set.

Galveston County Wildcat Reaching Interesting Depth

Houston.—Scouts will not be prone to give Humble Oil & Refining Company's Elias V. Rosenkrans 1 the casual once-over now that the Green's Lake prospect wildcat in Galveston County has reached the interesting depth of 4805 plus feet.

This wildcat, scheduled to be carried to 8000 feet if necessary, is located about four miles southwest of Hitchcock, in the Sarah White Survey. It is 6380 feet west from the northeast corner along the north line of the survey and 3950 feet thence south at right angles.

Otuside of a shut-down wildcat being fostered by H. H. Stevenson about three miles southwest of Dickinson, Humble Oil & Refining Company is the only active operator in the county, except of course Yount-Lee Oil Company, sole operator of High Island field.

Abandon Effort to Develop Oil on Votaw Prospect

Houston.—Efforts to develop production at Votaw prospect, a geophysical prospect, were halted this week with abandonment of W. R. Alexander et al's

Southwestern Lumber Company 1 in the Mary K. Sherman Survey of Harris County. The well, located on a 1200-acre block, was abandoned in sandy shale at 3691 feet.

Gas Showing Excites Polk County People

Houston. — Polk County people have been subjected to considerable activity during the week because of a gas sand with a slight oil odor encountered in Dick Schwabb's Carlton-Davis 1 in the old Sunshine district. The wildcat went into a broken sand and shale at 4181 feet and carried it to 4266 feet, where the well is preparing to set casing. A seven-minute drill stem test showed 350 pounds pressure while blowing wet gas through a three-eighths-inch choke. There was no oil.

Spurger Wildcat Good For 35 Million Cubic Feet

Houston.—As result of a test made through tubing, Houston Oil Company-Republic Production Company's Sterne Fee 1, Tyler County wildcat with possibilities of ushering in a new oil field near Spurger, was credited as capable of making 35 million cubic feet of gas per day at 4708 feet.

The well, located in the Adolph Sterne Survey, has been closed in and fuel therefrom will be used for the drilling of a second test, to be located a short distance northeast of the discovery well and on the same block of acreage.

Houston Oil Company and Republic Production Company hold in fee and leases about 20,000 acres in the vicinity of the strike.

Texas Gulf Coast Field Developments

Completions

Company, Well and Location	Initial Production Bbls.	Depth
CONROE FIELD—		
Humble O&R Co., Cartwright A-3	1152	5130
Pfaefflin 1, M. W. Real sur	¶2	5160
So. Tex. Dev. Co. 2 (wo)	1800	5100
So. Tex. Dev. Co. 9	1248	5161
C. C. Steinberg-Brown-Wheeler, Mrs. Fannie Hooper 1	1170	5044
FORT BEND COUNTY		
O'Hara et al, Mayes 1, N. F. Roberts sur	*	775
GOOSE CREEK FIELD—		
Newton & Lillie, Schilling 10	25	1850
HARDIN COUNTY—		
W. R. Alexander et al, Southwestern Lbr. Co. 1, Votaw prospect	*	3691
HARRIS COUNTY—		
Bayou Prod. Corp., C. W. Hahl 1, Wm. Hedge sur	*	5008
HULL FIELD—		
The Texas Co., Hannah Fee 7 (wo)	200	5096
MARKHAM FIELD—		
Rycade Oil Corp., Myers 4	*	3889
PIERCE JUNCTION FIELD—		
Gulf Prod. Co., Taylor 35 (wo)	*	3863
POLK COUNTY—		
G. Allen Williams et al, Carlton Davis 1, I&GN RR sur No. 52	*	4001
RABB RIDGE FIELD—		
Humble & Gulf, Lockwood & Sharp A-8	*	5630
George A-2	1008	5275

Wildcat Drilling Report

(Wells shut down not included)

AUSTIN COUNTY — Humble O&R Co., Wilson 5, Raccoon Bend, dr sandy shale at 3188 ft. Great Southern Drlg. Co., F. Schovajso 1, 3 mi s Bleiberville, td 2876 ft, rebuilding dk.

BRAZORIA COUNTY — The Texas Co., Ewing 2, Manvel, dr 2370 ft. Danciger O&R Co., W. C. Hunt 1, near Pledger, dr shale 5066 ft. Gulf Prod. Co., Lockwood 1, Wiley-Martin sur, ru. Layne-Texas Co., Wisdom 10, Damon Mound, dr gbo 833 ft. A. H. Parsons et al, J. D. Hughes 1, Halls Bayou, dr 1850 ft. Shell Pet. Corp., Blakeley-Winston 5, Danbury, dr 3660 ft. Tri-Fin Oil Co., Moers 1, F. Moore sur, dr 2000 ft.

BURLESON COUNTY—Poor Boy Oil Co., Polansky 1, M. B. Lawrence sur, dr 1909 ft. Shilo Oil Co., Bracey 1, Somerville dist, dr 2218 ft. Sanson O&G Co., Duckworth & Gilley 1, prep to spud.

COLORADO COUNTY — Bunte & Shell Pet. Corp., R. Matuska 1, Jno. Hennecke sur, dr below 4100 ft with no show.

FORT BEND COUNTY—Gulf Prod. Co., Moore 34, Orchard, dr 3250 ft. Lynch et al, Kneitz 1, dr 670 ft. Naylor & De Costa, Naylor 1, Horatio Chrisman sur, dr 6016 ft. North Star Pet. Corp., Guyler 1, Andrew Roberts sur, stg at 4002 ft. Paul & Gerke, Krenek 1, Gail Borden Jr., sur, dk. Magnolia Pet. Co., Hamphil 1, n of Rabb Ridge, dr 1894 ft.

GALVESTON COUNTY — Humble O&R Co., Elias V. Rosenkranz, Green's Lake prospect, Sarah White sur, dr 4810 ft.

GRIMES COUNTY—W. J. Brightwell, Combs 1, Samuel Beauman sur, sd at 3162 ft. Petroleum Southwestern Corp., Greer Bros. 1, Pat B. O'Connor sur, near Carlos, dk.

HARDIN COUNTY—Republic Prod. Co. & Houston Oil Co., Ben Andrus Fee 1, Dan Meter sur, 4 mi e Ariola, dr sn 866 ft. Gulf Prod. Co., Kirby Lbr. Co. 1, Ariola, ½ mi nw discovery well, dr 3188 ft, gbo. Houston Oil Co.-Republic Prod. Co., Ariola Fee X-1, Ariola, dr 4018 ft in sn and sh; Ariola Fee Y-1, dk; Ariola Fee Z-1, 877 ft; Ariola Fee 2, dr 775 ft; Ariola Fee 3, lcn. Chas. Poggi, J. L. Hooks 1, 5 mi s Selsby, dr 1656 ft.

HARRIS COUNTY—T. V. Buckholv & Son, Miller 1, Deer Park, dr gbo and li 1141 ft. Indian Hill Oil Co., W. L. Schweinle 1, Hufsmith, dr shale 3930 ft. Koinm Prod. Co., Burt & Griffith 1, w of Humble, dr sandy shale 825 ft. D. B. Cherry & Pritchard, P. S. Griffith 1, woc at 756 ft, Mt. Houston dist. Jno. B. Turnbow, Laureman 1, Genoa-Mykawa dist, W. B. Bissonett sur, dr 5310 ft.

JASPER COUNTY—Houston Oil Co., Richardson Fee 1, Benjamin Richardson sur, dr 200 ft. P. Michael, F. L. Eck 1, GC&SF sur No. 1, in gr sn and li at 1722 ft.

JEFFERSON COUNTY—Jno. R. Turnbull, Junker 1, Fannett, lcn on Gulf's 260-ac 1s in Wm. H. Smith sur. Gulf Prod. Co., Burrell 6, Fannett, dr 3500 ft.

LIBERTY COUNTY—Leon Brisley, Tr., J. M. Neal 1, 50 ac tr in E. Tanner sur, dr 2315 ft gbo.

MATAGORDA COUNTY — Rugeley et al, Cleveland 1, E. Hall sur, dr 1077 ft.

MONTGOMERY COUNTY—C. J. Daniel, Flowers 1, W. Barker sur, ru. Miller Prod. Co., Foster Lbr. Co. 1, M. B. Lawrence sur, sd at 4020 ft. Sutton & Hawkins T. D. Foster 1, Jose Maria de la Garza sur, dr shale 3320 ft. Plummer & McDaniels, Keystone Mills 1, td in gas sn at 5009, woc at 4984 ft.

NEWTON COUNTY—L. A. James, Price & Bevil 1, N. B. Lewis sur, dr 1688 ft. Sun Oil Co., Peavey Moore Lbr. Co. 1, sw cor county, dr 5677 ft.

ORANGE COUNTY—Houston Oil Co., E. Hurst 1, E. Hurst sur, lcn 2000 ft fr s and e lines of sur. E. L. Smith Oil Co., Miller Vidor 1, lcn in 640 ac tr in J. W. Swisher sur No. 3.

POLK COUNTY—Koch & Stephenson, Root 1, L. Castillian sur, dr 1271 ft. Dick Schwabb, Carlton-Davis 1, Sunshine dist, broken sn and shale 4181-4266 ft with slight odor oil, 7 min dst shwd 350 lb pres through ⅜-in chk, no oil.

TRINITY COUNTY—H. S. Chancey, J. B. Gibson 1, lcn in 200-ac tr in Wm. Beardsley sur.

TYLER COUNTY—Republic Prod. Co. & Houston Oil Co., Southwestern Dev. Co. 1, Adolph Sterne sur, tested through tubg 9/9/32, est good for 35 million cu ft dry gas, td 4708 ft.

WALLER COUNTY—Birdwell et al, Robertson 1, lcn. Rancho Oil Co. & Jim Oil Co., J. W. Harris 1, near Prairie View, dr 1200 ft.

WASHINGTON COUNTY—Sun Oil Co., A. Schulte 1, Clay Creek, lcn on 7½-ac tr in J. F. Perry sur.

WHARTON COUNTY — Treble Oil Co., Laura Hahn 1, N. Mancha sur, stg at 3315 ft. Smith & McDaniels, Mitchell 1, waiting orders at 3203 ft, dst at 3170-3203 showed 300 lb on ¼-in chk in 4½ min.

Louisiana Gulf Coast Field Developments

Completions

Company, Well and Location	Initial Production Bbls.	Depth
EAST HACKBERRY FIELD—		
Calcasieu Oil Co., Unsurveyed Island 3	*	3035
Union Sulphur Co., Humble 3, 11-12s-10w	1390	6003
OLD HACKBERRY FIELD—		
Yount Lee Oil Co., Carter Sweeney 3	*	3760
PORT BARRE FIELD—		
Gulf Ref. Co. of La., Wilson-Cochran 2 (wo)	*	3420

Wildcat Drilling Report

(Wells shut down not included)

ACADIA PARISH — Yount Lee Oil Co., Houssiere Latrielle 11, Jennings, dr hd sn 5031 ft.

ASCENCION PARISH—Union Sulphur Co., United Lands 22, Sorrento, in oil sn at 4506 ft, prep to dr plug.

CALCASIEU PARISH—The Texas Co., Miller Est. 1, Edgerly, dr 4110 ft gbo. Magnolia Pet. Co., B. T. Waite 2, set 4¾-in cas at 6878 ft, td in sn 6900 ft. Emerson & Starck, Ind. Lbr. Co. 1, Starks dome, dr at 3911 ft, sdtrkd at 3890 ft. Gulf Ref. Co. of La., Lutcher Moore 31, Starks, fsg at 2320 ft. Lockport Oil Co., Phenix Dev. Co. 1, Lockport, lcn and dk. Union Sulphur Co., Fee 770, Sulphur, dr 3075 ft; Fee 772, dr 3511 ft, PB to 3849 and milled out at 3486 ft; Fee 774, dr rk 2012 ft. Marrs McLean, Gray 14, Vinton, dr 3050 ft.

CAMERON PARISH—Jim Oil Co., Erwin 1, (wo), E. Hackberry, in sn at 3009 ft; Erwin 9, ru on lcn 150 ft e No. 4. Texana Oil Co., Breaux 1, E. Hackberry, dk. Union Sulphur Co., Pure Oil Co. 2, E. Hackberry, MIR. Yount Lee Oil Co., State School Land 11, Old Hackberry, td 5427 ft, lost 3 jts dr st. Pure Oil Co., Yount Lee 11, Sweet Lake, dr 110 ft.

IBERIA PARISH—Jefferson Lake Oil Co., Lake Peigneur 38, Jefferson Lake, cmtd 10-in at 572 ft, completed as sulphur test.

IBERVILLE PARISH — Shell Pet. Corp., Wilbert 6, White Castle, dr 3141 ft, sdtrkd at 2262 ft. Standard Oil Co. of La., Myrtle Grove-Wilbert 3, Choctaw cor oil sn at 2025 ft.

JEFFERSON DAVIS PARISH—Shell Pet. Corp., Fontenot 2, Iowa, dr hd sn 5995 ft.

PLAQUEMINE PARISH—The Texas Co., State Garden Isl Bay 5, Garden Island Bay, capped after blwg out at 801 ft.

ST. LANDRY—Port Barre Oil Co., Sibille 1, Port Barre, pulling scr to dpn at 3494 ft.

TERREBONNE PARISH—The Texas Co., State Dog Lake 6, Dog Lake, shwg oil at 2223 ft; L.L.E. Lake Barre 5, Lake Barre, in oil sn at 3693 ft; State Lake Barre 7, dr hd sn rk at 4755 ft; State Lake Barre 17, dr rk 2980 ft; Lake Pelto 7, Lake Pelto, dr cap rk 1925 ft.

VERMILION PARISH—Pure Oil Co., Alliance Tr. Co. 3, Gueydan, dr shale 1560 ft.

VERNON PARISH — Minerals Division of Llano Co., Llano Del Rio 1, 2 mi sw Leesville, sd at 1950 ft.

LOUISIANA FIELDS

General Increase in Wildcat Work Noted, Particularly in Central Part of State. Zwolle Permits Rise.

Wildcat Work Increased Over Several Parishes

Shreveport, La.—Wildcatting in North Louisiana gained more momentum during last week. Two new tests were launched for the north offshoot to the Greenwood gas field in Caddo Parish opened several months ago in the Tokio horizon. These new operations are Nick Barbarre's Hammack 1, Section 6-18-16 and Louanna Oil & Gas Company's Hammack A-1, Section 5-18-16. The latter company during the week completed Cushman 2, Section 33-19-16, as a 7,250,000-foot gasser at 2758 feet. Rock pressure was 1000 pounds.

In DeSoto Parish, Aleene Ibach, Trustee, erected derrick for Rambin Estate 1, NW NE NE Section 32-11-11, for a 3500-foot test on a block of 5000 acres. Possibilities of the Nacatosh, Blossom and Tokio horizons will be explored. J. C. Thompson, Shreveport geologist, did the geological work. This test is between the Bull Bayou and Naborton fields to the north and northeast and the Pleasant Hill and Zwolle fields to the south. O. A. Gautier is associated with Mrs. Ibach in drilling the test.

Black Lake Development Company made location for another wildcat in Bienville Parish, Petty Stave Company 1, NW NW Section 19-18-6w. Geologists say there is a definite structure in this part of Bienville Parish, and one previous test has shown much oil in the Nacatosh. The last test drilled by the same operators on the block was recently abandoned. Belmont Oil Company has rig up for a wildcat in Bossier Parish, Edwards 1, SW NE Section 12-18-12, several miles southwest of the shallow Bellevue field, and apparently on an axis that runs southwest from that field to the Greenwood gas field in Caddo Parish.

Zwolle Permits More Than Week's List of Completions

Shreveport, La.—Despite six dry holes in Zwolle during the week ending October 13, and only one producing oil well, there were 14 new locations announced for that field during the week. Most of the new locations were for the southeast part of the field, which in the last three weeks has taken the lead away from the other "hot spots" of the erratic Zwolle marl-chalk field that stretches intermittently for 25 miles from east to west.

Central Louisiana Wildcat Work Continues Increase

Shreveport, La.—The "play" for the central part of Louisiana and south of the Angelina-Caldwell Flexure, developing from the discovery at Conroe, Texas, continued to gain momentum during last week.

In the northeast corner of Rapides Parish, Petroleum Industries, Inc., of Shreveport has assembled a 10,000-acre block centering around Section 13-5n-2e, for a 3500 foot test. This block is located on a sub-surface high mapped on top of the Jackson formation, with several hundred feet of closure. It is in the trend eastward from Conroe. Several major companies have favorable geophysical results on this high. Edge wells to the high have encountered good showings of both oil and gas in the Catahoula, Jackson, and Cockfield formations. The block is located 24 miles south of the Urania field in La Salle Parish, which produces oil from the contact of the Claiborne-Wilcox formations.

The block is 10 miles south of the White Sulphur field which produces oil from the basal Jackson. The 3500 foot test will be sufficient to penetrate the Wilcox several hundred feet and test all possible horizons of production; contact of Catahoula and Jackson; the Jackson, Cockfield, Sparta, Cane River and first sand zone in the Wilcox.

In Grant Parish northwest of Rapides Parish, William P. McNeely and Associates have materials on location for Cameron 1, SE NE Section 27-7n-3w, approximately in the center of a 6500 acre block, for a test to go 3000 feet. The acreage is northeast of Colfax, and is located along the southern edge of Latt Lake.

Blocks have recently been assembled in Vernon Parish, a west border parish, in the play east from Conroe. In Avoyelles Parish, T. J. Woodley, Trustee, recently assembled 30,000 acres and plans to go to base of the Jackson in Thompson-Koltz 1, Section 11-2s-5e. In Caldwell Parish a 5000-acre block around Hudson & Bird's Burton 1, Section 36-12n-2e, drilled to 2986 feet, is reported being re-assembled to deepen to 3500 feet.

Sabine Parish Well Flows Fifty Barrels of Oil

Shreveport, La. — Gibson-Johnson & Higgins' Frost-Johnson 1, NW SE Section 19-9-13, Sabine Parish, Converse district, 6½ miles north of Zwolle production, which had swabbed and bailed 50 barrels of 45.6 gravity oil daily for several days, started flowing late Wednesday, October 12, after the hole filled with oil. It is flowing through 8¼-inch casing cemented at 1548 feet. Total depth is 1626 feet in chalk; elevation is 252.8 feet.

The operators have definitely decided to take the well as a producer in the chalk and have taken the rig to Frost-Johnson 2, Section 15-9-13. The location for the latter test was picked early last year by Durward N. Jolley, consulting geologist of Shreveport. Location for Frost-Johnson 1 was chosen by H. D. Easton, Shreveport geologist. The two blocks although owned by the same operators are entirely separate.

Sandfield Oil & Gas Company is coring below 1690 feet and when the marl below the Midway is picked up will set 8¼-inch casing for a test of the marl-chalk horizon in Bowman-Hicks 1, NE NE Section 26-9-13. Elevation is 302 feet. C. M. F. Oil Company has junked hole at 1973 feet in Aaron & Nusser 1, NW NW Section 32-9-13, also in the Converse area, and is skidding 125 feet northwest for a new hole which will go to the marl-chalk, their original test having been designed for a 3100-foot test, as there are possibilities of pay on this structure at top of the marl-chalk, at 2100 feet base of the chalk, at 2200-2400 feet Blossom, in the Pleasant Hill producing zone at 3100 feet to 3350 feet in sands of the Washita-Fredericksburg and at 4500-4700 feet in the Glen Rose Oolitic lime.

Louisiana Field Developments

NORTH LOUISIANA

Completions

Company, Well and Location	Initial Production Bbls.	Depth
CADDO PARISH—		
Louanna O&G Co., Cushman 2, 33-19-16	¶7¼	2758
CLAIBORNE PARISH—		
W. E. Rembert et al, J. L. Hunt 2, 18-23-8w	*	1050
United Gas Pub. Serv. Co. et al, Warren Brown 1, 1-19-6w	¶5	4490
CONCORDIA PARISH—		
M. M. Stoker et al, Gillespie 1, 56-8-10	*	3705
JACKSON PARISH—		
Southern Advance Paper Co., Fee 1, 19-15-3w	*	2650
SABINE PARISH (Zwolle)—		
J. H. Askew, Lyons 1, 31-8-10	*	2760

Askew & Ellis, McNeely E-1, 14-7-11	*	2632
Coats Pet. Co., Davis 1, 28-7-11	*	2823
S. S. Martinez 4, 3-7-13	*	2519
Dengail Oil & Gas Co., Nulton F-1, 2-7-13	*	2501
Nulton G-2, 3-7-13	*	2475
Richie Prod. Co., Byrd 1, 1-17-11	100	2465

New Operations

BOSSIER PARISH—Belmont Oil Co., Denver, Edwards 1, 12-18n-12w, 75 ft n and e from center of sec.

CADDO PARISH—Louanna O&G Co., Inc., Shreveport, Hammock A-1, 5-18n-16w, 760 ft s and 760 ft w ne cor sec. Shreveport Oil Corp., Shreveport, Muslow 5, 32-21n-15w, approx 400 ft e and 350 ft s nw cor se¼ of sec.

CAMERON PARISH — The Texas Co., Shreveport, State-East Hackberry 10, -12s-9w, 900 ft e and 200 ft n ne cor sec 13-12s-10w in Sec 12s-9w.

DE SOTO PARISH—Guy I. Warren, Mansfield, La., Waggoner 1, 5-12n-14w, 150 ft s and 150 ft w cen of sec.

PLAQUEMINES PARISH — Freeport Sulphur Co., New Orleans, La., Cockrell-Moran 6, 20s-26e, approx 11,650 ft n and 425 ft w of ne cor of sec.

RICHLAND PARISH — Pelican Nat. Gas Co., Shreveport, Jas. A. Noe 2, 11-17n-5e, 1320 ft n and 660 ft w s¼ cor of sec.

SABINE PARISH—Jas. B. Hughes, Many, La., Chester Johnson, 2-7n-11w, 250 ft s and 670 ft e from nw cor sw¼ nw¼ of sec. E. F. Neely, Shreveport, Ponder 3, 15-7n-11w, 200 ft s and 190 ft e nw cor nw¼ sec. E. F. Neely, Shreveport, Clanon 3, 14-7n-11w, 150 ft w and 400 ft n se cor se¼ nw¼ of sec. Sabine Prod. Co., Inc., Shreveport, Sabine Lbr. Co. 3, 3-7n-13w, 330 ft n and 330 ft e sw cor nw¼ se¼ of sec. J. S. Birdwell, Shreveport, Mrs. Elizabeth Stille 1, 16-7n-11w, 200 ft s and w ne cor sw¼ ne¼ of sec. J. H. Askew, Shreveport, McNeely 1, 14-7n-11w, 150 ft n and w se cor ne¼ se¼ of sec.

TERREBONNE PARISH—The Texas Co., Shreveport, State Caillou Island 7, 19-23s-20e, 300 ft s and 300 ft w ne cor of sec.

Wildcat Drilling Report

(Wells shut down not included)

BIENVILLE PARISH—Black Lake Dev. Co.'s Petty Stave Co. 1, nw nw 19-18-6w, lcn.

BOSSIER PARISH—Belmont Oil Co.'s Edwards 1, sw ne, 12-18-12, rig. Steckol & Breazeale, Nattin 1, sw ne 15-22-14, setting 6-in cas, td 3000 ft.

CADDO PARISH—Caddo Prairie Dev. Co.'s Nicholson 1, ne sw 10-25-15, dk pat. Nick Barbare's Hammack 1, 6-18-16, lcn. Louanna O&G Co.'s Hammack A-1, 5-18-16, rig.

CLAIBORNE PARISH — Webster O&G Co.'s Smith 1, 8-21-7w, rig.

DE SOTO PARISH—De Soto Dev. Co.'s Nickie 1, 7-13-12, rig. Walters & Nicholson's Jim Guy 1, 3-11-13, 6-in 2745 ft, wosr after heading oil, td 2767 ft. Honeycutt O&G Co.'s Porter 1, 26-12-13, dr 1230 ft. Jack Whitson's Sanders 1, sw sw 19-11-13, arr ds test 1457 ft chalk. E. T. Oakes' Johnson 1, 30-13-15, core 4163 ft. Potter et al's Dowling Bros. 1, 31-14-14, claim 2 ft sand, arr set 6-in cas, td 3068 ft. Warren & Craig's Wagner 1, 5-12-14, rig. Mrs. Aleene Ibach, Tr.'s Rambin Estate 1, nw ne ne 32-11-11, dk.

GRANT PARISH—W. P. McNeely's Cameron 1, se ne 27-7n-3w, materials. Robichaux et al's Bradford 1, 16-9-1e, rig.

MOREHOUSE PARISH—H. W. Snowden's Meyers 1, ne ne 15-22-7e, dk. Feazel & Kalil's Davenport 1, 28-21-6e, sd 2510 ft.

NATCHITOCHES PARISH—Saline Bayou Dev. Co.'s Bodcaw Lbr. Co. 1, 9-12-5w, sd 1940 ft. Natchitoches Pet. Co.'s Edenborn 1, 4-11-6w, dr 1950 ft. Dr. H. S. Gerson et al's Smith 3, arr set cas 530 ft. Texana Oil Co.'s Clarke-Morse 2, 23-5-6w, arr set 6-in cas 3452 ft, td 3475 ft. J. B. Oil Co.'s Hankins 1, 67-10-7w, sp.

OUACHITA PARISH—Monroe Oil & Roy Co.'s Thieler 1, 34-18-2e, dr 2325 ft.

RED RIVER PARISH—Petroleum Ind., Inc.'s Madden 1, sw ne 21-14-10, sr 2801 ft.

SABINE PARISH—M. W. Ransom's Simpson 1, 30-7-10, dk. J. R. Bunn's Sabine 1, sw ne 9-7-13, 3-in 2035 ft, swabbing td 2422 ft. R. L. Gay, Tr.'s Long-Bell A-1, nw nw 10-8-13, sd for water 6482 ft. Loring Oil Co.'s Bowman-Hicks 21, 16-7-12, elev 247 ft, top marl 2473 ft, top chalk 2483 ft, dr 3470 ft (5000 ft test). H. C. Maulding's Moores 1, 16-7-13, arr dr plug in 6-in cas cemtd at 2077 ft. LeGrand & Jackson's McGough 1, 2-8-10, 7-in od cas 2170 ft, dr plug td 2176 ft (est). Magnolia Pet. Co.'s Williams 2, nw ne 6-7-10, wosr 2653 ft. C. M. F. Oil Co.'s Musser & Aarons 1, nw nw 32-9-13, elev 235.6 ft, base Midway 1580 ft, junked and abandoned at 1973 ft in chalk with hung drill pipe, skidding over for new hole. Gibson-Johnson & Higgins' Frost-Johnson 1, nw se 19-9-13, elev 252.8 ft, base Midway 1547 ft, 8¼-in cas 1548 ft, hf 45.6 grav oil, wosr, td 1626 ft chalk. Frost-Johnson 2, 15-9-13, rig. Sandfield Oil Co.'s Bowman-Hicks 1, ne ne 26-9-13, elev 302 ft below 1690 ft. Supreme Oil Co.'s Pruitt 1, 30-8-11, dr plug in 6-in cas cemtd at 2226 ft. Triangle Drilling Co.'s La Long Leaf 1, 11-6-11, sd 4013 ft. C. W. Smith et al's Pattison 1, 30-10-11, dk. W. M. Ungerman's Cross 1, sw se 25-8-11, moving in rig. Coming Oil Co.'s Williams 1, se sw 31-8-10, 6-in cas 2357 ft, flowing est 500 bbls oil day through 1-in choke, td 2487 ft, wo gauge. Roshko Labarre's Maines 1, se ne 35-8-11, lcn. Simmons et al's Fleming 1, 11-8-13, dk.

VERNON PARISH—Llano Cooperative Colony's Fee 1, 34-2n-9w, dr 2400 ft, sandy shale. Earl Jones' Willis 1, 32-3n-9w, dk.

WEBSTER PARISH—Pearce et al's Ambrose 1, 22-20-10w, dr 2500 ft.

WINN PARISH—P. V. T. Oil Co.'s Southern Adv. Paper Bag Co. 1, nw sw 28-13-5w, sr 1125 ft.

UNION PARISH—E. S. Goens' Frost Lbr. Co. 1, 17-22-2e, lcn. Wong Hing, Tr.'s Union Sawmill 1, se se 15-22-1e, rig.

WEST CARROLL PARISH—Mamie S. McCurry et al's Richardson & Donnan 1, 13-19n-9e, dk.

ARKANSAS FIELDS

Second Commercial Well Completed in Miller County

Texarkana, Arkansas.—Miller County, Arkansas' second commercial oil well was completed during the last week when Fitzwater and associates' E. L. Beck 1, SW SE Section 33-15-26, was officially listed as a producer, flowing oil by heads through two-inch tubing at an estimated rate of 25 barrels daily. Total depth is 2951 feet; elevation is 180 feet. A string of 4½-inch casing was set at 2949 feet after 6⅝-inch had been cemented at 2919 feet. The oil is said to test 29.9 gravity corrected.

Several well-known geologists have stated that the production appears to be coming from another sand lens, probably Woodbine in age, similar to the sand in which Lenz and associates about two years ago completed Johnson 1, Section 24-15-26, Miller County, around 2850 feet, which was estimated at a 20 to 60-barrel producer daily. Its exact yield was never announced. This was Miller County's first commercial well and its only one until the E. L. Beck 1.

Three new locations in Miller County were announced last week, bringing the total of tests in Miller and La Fayette Counties to 13, counting drilling operations, rigs, derricks and locations. Duluth-Arkansas Oil Company has derrick up for Beck 1, NW SW Section 34-15-26; John C. Rogers has derrick up for Price 1, Section 17-16-25, and Bob Simmons has materials on location for Lamb 1, Section 14-16-27.

Assembling Three Wildcat Blocks in Union County

El Dorado, Arkansas.—Mrs. Mamie McCurry and W. D. Wingfield who last week announced location for a wildcat test in West Carroll Parish, northeast Louisiana, Richardson & Donnan 1, Section 13-19n-9e, are reported assembling three wildcat blocks in Union County, Arkansas.

One block of wildcat acreage in Union County is being assembled centering around Section 31-19-16 where W. M. Coats several years ago drilled a test to 4100 feet. Dan Brooks is reported assembling a block in southwest Union County.

Davis and Shope who have abandoned Berry Davis 1, Section 34-16-14, between the El Dorado East field and Champagnolle, as a junked hole at total depth of 2969 feet, are reported planning another test soon.

Arkansas Field Developments

Completions

Company, Well and Location	Initial Production Bbls.	Depth
MILLER COUNTY—		
Fitzwater et al, E. L. Beck 1, 33-15-26	25	2951
UNION COUNTY—		
Helms & Shope, Berry Davis 1, 31-16-14	*	2969
Wilson & Chapman, A. H. Hadley 1, 3-18-13	*	3557

Wildcat Drilling Report

(Wells shut down not included)

CLEBURNE COUNTY—Fred S. Craver's Donithan Lbr. Co. 1, sw sw 34-11-9, dr 1100 ft.

DREW COUNTY—Cooperative Dev. Co.'s Ogles 1, 35-13-5, sr 3310 ft.

LAFAYETTE COUNTY—Fox & Langford's Coleman Bros. 1, se se 25-16-25, dk. Sam Wilson, Jr.'s Smith 1, nw se 24-19-25, rig.

LITTLE RIVER COUNTY—American Portland Cement Co.'s Fee 1, sw ne 21-12s-32w, dk. Harrell et al's Taafe 1, 25-12s-32w, dr 3071 ft.

MILLER COUNTY—Fitzwater et al's E. L. Beck 2, sw sw se 33-15-26, rig. C. J. Norsen 1, se sw 20-15-27, 10-in 121 ft. Fouke 1, ne ne 11-17-27, 12¾-in cas 105 ft. Duluth-Ark. Oil Co.'s Stone 1, sw se 32-14-26, sd 2300 ft after plug back from 2535 ft. Harold Buck 1, nw sw 34-15-26, dk. Lenz et al's Arthur Dean 1, nw se 19-15-25, rig. W. S. King's E. L. Beck 1, ne nw 35-15-26, sp, dr 900 ft. Goodwin et al's E. A. McCowan 1, nw se 22-15-28, rig. Jno. C. Rogers' Price 1, 17-16-25, dk. Bob Simmons' Lamb 1, 14-16-27, dk pat.

ST. FRANCIS COUNTY — Kentucky-Ark. O&G Co., Inc.'s Britton 1, ne nw 1-4n-1e, dr 3350 ft.

WOODRUFF COUNTY—B. F. Thompson's Rosser 1, 7-5n-2w, lcn.

NEW MEXICO . . . ROCKY MOUNTAIN

Kevin-Sunburst Well Holds Interest Throughout State. Important Extension Well Near Completion at Hobbs.

Dozen Hobbs Operations Will Require Offset Tests

Hobbs, New Mexico.—Development work in the Hobbs field has increased to more than a dozen operations, including six tests now drilling. A number of offsets will be required upon the completion of most of these tests, thus assuring a continuation of drilling over the balance of the year. Skelly Oil Company's H. D. McKinley 1, SWc N½ NW Section 20-18s-38e, is making a bid for a minor extension to the north central portion of the field, and should be completed during the coming week as seven-inch pipe has been cemented above the lime pay at 4040 feet. Other completions will follow shortly thereafter, as Shell Petroleum Corporation's McKinley 3-B is drilling below 3350 feet, and Humble Oil & Refining Company's Bowers 1-B is drilling below 3200 feet after logging top of brown lime at 2850 feet. Gypsy Oil Company's Grimes (east) 2 has resumed drilling after cementing 9⅝-inch pipe at 2758 feet.

Western Drilling & Engineering Company's State 1, NEc SE Section 13-17s-36e, is trying for a new field in a northwest trend from the Hobbs area, and is drilling below 3320 feet after topping anhydrite at 1960 feet, and first salt at 2090 feet.

Sell Bolton Creek Crude After Three-Year Wait

Casper, Wyo.—A sale of 15,000 barrels of black oil from the Bolton Creek field was recently made by Iowa-Wyoming Oil Company, subsidiary to the Kinney-Coastal Oil Company, to the refineries at Casper. This is storage oil which has been accumulating at Bolton Creek during the last three years, mostly from one well which has been producing steadily since the field was shut in. The crude is piped into Casper through the six-inch line belonging to Bolton Oil Company.

Government Royalty Oil Payment Not to Change

Casper, Wyo.—The Department of the Interior has notified the Casper offices, United States Geological Survey, that the order requiring producers on the public domain to pay royalties on 100 per cent of the volume of oil recovered, instead of 97 and 98 per cent as has been the rule for the last 60 years, has been suspended. The new ruling would have become effective October 1. Various oil and gas producers associations, pipe line companies, and crude oil purchasing companies had protested the new ruling, and the order of suspension followed an appeal taken against the order by Humble Oil & Refining Company. The government contends that when the oil sold to the purchasing companies is free from water or sediment, it should be paid for in the full amount, according to tank table measurements. The ruling does not contemplate 100 per cent payment on oil containing water, basic sediment, or emulsion.

Kevin-Sunburst Well Has Prospects; Near Objective

Shelby, Mont.—The Rocky Ridge test being drilled in the western part of the Kevin-Sunburst field by West Side Syndicate (Fred Platt and associates) found both oil and gas in the Sunburst sand at 1517-48 feet, found the Ellis-Madison contact dry, and is now drilling into the lime with the expectation of encountering commercial production within a very short time. The well checks higher on structure than others in the vicinity, and reports that there are indications that the same conditions may be expected here as were found in the big producer completed by Ohio Oil Company some years ago.

Interest was aroused in this "old-new" part of the field when the Platt interests moved in to work out a theory which had been advanced by Mr. Platt after a study of well logs. Completion of the well is being awaited with considerable interest on the part of all operators in the state.

Cut Bank Field Active Extension in Prospect

Cut Bank, Mont.—There are now 12 operations either actually under way, or moving in in the Cut Bank field north of here. The Texas Company has started drilling Fisher 1 on Section 10-35-5w. New interest flamed in the district last week when Roy C. Tarrant's Reickhoff 1 found showings in a sand topped at 2920 feet and shut down to run 6⅝-inch casing before drilling in. This well will prove a western extension of about one mile; it is a mile northwest of the B. & H. Oil Company's Yunck 1 which, although it had excellent showings of oil, was never completed because of mechanical difficulties. It is, moreover, two miles west of the Drumheller Yunck 1, actually the discovery well in the entire Cut Bank territory; it was good for both oil and gas, but the oil production was cased off and the well is now producing gas for the town of Cut Bank.

Western Washington Test Shows Gas But No Sand

Aberdeen, Wash.—Gas showings from shale formations continue to be reported from the wildcat well being drilled by the Ohio Oil Company on the Aberdeen structure in Western Washington. No true sand has been encountered, according to company officials. Well is Robinson 1 on Section 4-17-9. It was hoped that commercial gas production might be developed on the structure, an excellent market in that part of Washington being near at hand.

Wyoming Town Gets Gas From Old Oil Failure

Arminto, Wyo.—This town in northeastern Natrona County, Wyoming, has recently been furnished with natural gas from the old Wyland well, completed in 1926. The Texas Company drilled the well, but encountered no oil, and the company turned it back to the Wyland group. Later it was taken over by the Danaher interests of Minneapolis. A two-inch line into the town was laid recently, and a distributing system installed.

Rocky Mountain Field Developments

MONTANA

Completions

Company, Well and Location	Initial Production Bbls.	Depth
PONDERA COUNTY (South Pondera structure)—		
Bell-Adams, Venetz 1, 21-27-4w	*	1960

Wildcat Drilling Report

(Wells shut down not included)

BROADWATER COUNTY—Capitol O&G Co., nw 7-8n-1e, dr 2500 ft.

CARBON COUNTY—Corbett Roy. Co., sw se 1-6s-23e, reset 8-in at 1120 ft, td 1150 ft. Jack Creek O&G Co.'s 2, se 15-7s-23e, dr 1208 ft.

CARTER COUNTY—E. T. Moorehead, sw 34-4s-57w, wait for 12½-in at 362 ft.

FALLON COUNTY—H. W. MacDonald's 1, sw 28-8n-60e, dr below 1930 ft.

FERGUS COUNTY—Melton Corporation's 1, sw 24-21n-17e, prep to run cas for w s o to dd 3300 ft.

GALLATIN COUNTY—Montana Gas & Pet. Corp.'s Adams 1, 35-1n-2e, dr 1675 ft.

GLACIER COUNTY—Tarrant et al's Yunck 1, nw nw 12-34-6w, dr 2569 ft. Tarrant et al's Reickhoff 1, ne 3-34-6w, run 6⅝-in to test 2921 ft. Montana Power Co.'s Simereo 1, n½ 5-33n-5w, 3M gas 2700 ft.

GOLDEN VALLEY COUNTY—Golden Valley Oil Co., 2-6n-22, set 8¼-in at 3400 ft.

HILL COUNTY—Fargo Oil & Gas Co., 29-37n-15e, dr 875 ft.

LIBERTY COUNTY—Peoples O&G Co., nw 17-35-6e, dr 2400 ft. Dohm et al's Millen 1, sw 10-37-5e, fsh 295 ft.

PETROLEUM COUNTY—St. Cloud O&G Co., sw ne 20-34-24e, sd 515 ft.

SWEETGRASS COUNTY—Shoshone Con-

solidated Oil Co., nw nw 23-2n-15e, dr below 6000 ft.

TOOLE COUNTY—Liquid Gold Oil Co.'s 1, 25-36-1e, dr in 2665 ft.

VALLEY COUNTY—Opheim O&G Co., ne 28-37n-38e, sd temp 1000 ft.

YELLOWSTONE COUNTY — Spokane-Laurel Oil Co., sw se 30-2s-24e, ur 6⅝-in 1600 ft. Peter Antonioli, ne ne 2-2n-25e, wait for cas 2370 ft. Rice-Fulton et al, 20-2n-23e, moving in.

CASCADE COUNTY—Charles Merz's Sheffels 1, 4-21-4e, dr 1865 ft.

WYOMING

Wildcat Drilling Report

(Wells shut down not included)

CONVERSE COUNTY—Converse O&G Co., sw sw 27-33n-72w, sd 2355 ft.

CROOK COUNTY—St. Onge O&G Co., ne se 20-53n-61w, dr 450 ft. McWethy et al's 1, 1-49n-67, changed to National machine, td 530 ft. Holden & Lawrence Ref. Co., nw sw 25-49-67, moving in.

FREMONT COUNTY—Ward O&G Co., 28-34-90, circulating to loosen tools stuck at 2100 ft, td 4150 ft. Yellowstone Oil Co.'s Gabus 1, sw 14-38-94w, fsh pipe 2210 ft.

LINCOLN COUNTY—H. C. Harris et al, se 14-21n-117e, sd in gray lime 1507 ft.

NATRONA COUNTY—Mutual Oil Synd.'s Midway 2, sw se 14-36-79, co to bottom, string up tools to dd into Muddy sand, td 6065 ft. Summit Oil Co.'s Trevett 1, 21-33-80, dr around 1575 ft.

SWEETWATER COUNTY—Vermillion Oil Co., sw se 15-12n-99w, moving in to resume 4685 ft.

UINTA COUNTY—Transwestern Pet. Co., Ltd. (Doheny) 5-14n-118, gas show 4800 ft. Park City O&G Co., ne nw 16-15n-118w, recement for w s o 2968 ft. Bear River Oil Co., Ltd., ne se 13-15n-120w, gas show reported, sd 1000 ft.

WASHAKIE COUNTY—Bales Oil Trust's Brome 1, ne nw 13-48n-90w, test 1430 ft.

WESTON COUNTY—Julius Peters et al's Weitzell 1, nw 30-46-64, cleaning out after shot 4590 ft. Gose Synd., ne 28-37n-63w, pull 4½-in to ur 6-in, td 5050 ft. Voorhees et al., se sw 26-48n-64, ready to sp.

NEW MEXICO

Completions

Company, Well and Location	Initial Production Bbls.	Depth
LEA-LYNCH POOL—		
The Texas Co., Sate 3-A, Sec. 2-21s-33e	600	3784
EUNICE FIELD (Lea County)—		
Tidal Oil Co.-Darby & Devonian, State 1	525	3985
SAN JUAN COUNTY—		
Continental Oil Co., Rattlesnake 24, 1-29n-19w	270	7370

Wildcat Drilling Report

(Wells shut down not included)

BERNALILLO COUNTY—Norrins Realty's Pajarito Grant 1, 22-9n-1e, standardizing, 10-in set at 3559 ft. Norrins Realty's Galegas Grant 1, 19-11n-4e, rigging up.

CHAVES COUNTY—R. D. Compton, sw se 20-10s-24, ur 8-in, co to test shutoff 899 ft. Warman Oil Trust's Weldon & Hoar 1, se 9-14s-25e, rigging up.

De BACA COUNTY — Montgomery et al's Wood 1, sw 6-4n-20e, sd 4662 ft. Landowners Oil Co.'s State 1, ne 16-1s-27e, sd for orders 5126 ft.

DONA ANA COUNTY—Middle States O&G Co.'s Boretzi 1, 14-36-5e, rig up. Viking O&G Co.'s Cox 1, sw nw 26-25-5e, dr below with rotary 250 ft.

GUADALUPE COUNTY—N. M. Prod. & Ref. Co.'s McMillan 1, 24-5n-16e, wait for orders 4507 ft. N. M. Explor. Co., Ltd.'s Anton Chico Grant 1, sw 20-9n-17, sp.

RIO ARRIBA COUNTY—Governador Oil Co., 1, se 14-29n-7w, sd 2642 ft. Pan State Oil Co., 26-3s-1e, rigging up.

ROOSEVELT COUNTY—Peterson et al's Good 1, se nw 32-5s-30e, rig up.

SAN MIGUEL COUNTY—Cabra Springs O&G Co.'s Thompson 2, ne 22-12-22, lcn.

SANTA FE COUNTY—Kelsey Clients Dev. Est., 1, 26-10n-10e, dr 825 ft.

SOCORRO COUNTY—J. C. Green et al, 1, 14-2n-5w, sd 300 ft.

VALENCIA COUNTY—Homer C. Mills, Inc.'s Tome 1, nw sw 29-6n-3e, sp.

COLORADO

Wildcat Drilling Report

(Wells shut down not included)

ADAMS COUNTY—Hills Dome Lease Dev. Co., se 27-3s-68w, awaiting contractor 3978 ft.

ARAPAHOE COUNTY—McDeb Drlg. Co.'s Fitzsimons 1, ne 7-4s-68w, sd 6110.

DELTA COUNTY—Black Canyon O&G Co., lot 12, 5-15s-94, install larger rig 330 ft.

ELBERT COUNTY—J. M. Botts, se 7-8n-58w, dr below 4200 ft.

EL PASO COUNTY—Gulf States Oil Corp.'s Carson 2, ne 10-16s-66w, dr out plug 2000 ft.

GRAND COUNTY—Oil & Mineral Lands, Inc.'s McElroy 1, se sw 14-2n-81, resume at 618 ft.

LaPLATA COUNTY — McGarr Pet. Co.'s Pinon Mesa 1, ne 34-33n-12, rig up. Phipps et al, sw 9-33-1e, sd 520 ft. J. W. Irwin & Co.'s Doescher 1, nw 29-33-13, run pipe for w s o 3171 ft.

LAS ANIMAS COUNTY—P. W. Harr's Schneider 1, sw se se 10-33s-63w, dr 700 ft. P. W. Harr's Barela 1, nw ne 33-33s-62w, dr 1520 ft.

LINCOLN COUNTY—Eastern Colo. Oil Corp.'s State 1, nw 36-14s-57w, hfw from Dakota 3464 ft.

MOFFAT COUNTY—W. A. Myers et al, sw sw 16-4n-101w, dr below 3250 ft.

MONTROSE COUNTY—Uncompahgre O&G Co.'s Vandemark 2, 27-50n-10, resume 800 ft.

ROUTT COUNTY—Mid-Colorado Pet. Co.'s Omholt 1, se 29-4n-87, resum, 2M gas show, dr 1917 ft.

WELD COUNTY—Ohio Oil Co.'s Butters 1, 7-6n-60w, dr 6750 ft. Ramsey Pet. Co.'s Tighe 1, sw ne se 15-7n-59w, dr 6090 ft. Retter Oil Co.'s Cronin 1, sw 24-1n-66, dr 760 ft.

Southeastern States

Test to 4500 Feet Planned For Jasper County

Jackson, Mississippi.—One gas producer and one new location were announced in the Jackson gas field during the last week. A new wildcat test was launched for Jasper County, Mississippi.

Love Petroleum Company's J. M. Heartfield 1, located 660 north and 560 feet east SWc Section 6-5n-2e, an outside test to the east in the Rankin County part of the Jackson field, was completed at 2420 feet in Midway chalk making an estimated 35 to 40 million cubic feet of gas. Elevation is 270 feet; Midway black shale was logged at 2322 feet and chalk at 2416 feet.

Jackson Oil & Gas Company's Mayes 4, Section 1-5n-1e, Rankin County, in the northeast part of the Jackson gas field, showed an estimated four to five million feet of gas when bailed and failed to increase volume when blown and probably will be killed and deepened. Total depth is 2415 feet with 13 feet of chalk. Elevation is 259 feet.

The Jackson field's new test is Natural Gas Company of Mississippi's Mary C. Holder 1, located 1650 feet east and 660 feet north of southwest corner Section 13-5-1e, Hinds County.

A 4500-foot test is planned in L. Spraragen and associates' Bank of Philadelphia 1, SE SE Section 35-3n-12e, Jasper County, Mississippi. Rig is already up. Drilling contract was given to Meredith Drilling Company. The block on which this location was made has been geologized and gone over by geophysicists closely in recent months.

Mississippi Wildcat Makes Show of Gas on Test

Jackson, Mississippi.—Stauffer and Kouri, Trustees, made a drill stem test October 10 in Bond 1, SW NE Section 18-2n-14w, Lamar County, southwest Mississippi, at total depth of 3016 feet, after coring from 3016 feet in sandy shale to 3026 feet in green sand. The drill stem with wall packer shut off at 2860 feet made 27 fourbles of mud, salt water and gas in 10 minutes. There was enough gas to burn in breaking out some of the fourbles.

United Gas Public Service Company has acreage near this test and Sun Oil Company is reported securing some nearby.

Mississippi Report Gives Data on Gas Production

Jackson, Miss.—The grand total of gas production in the state of Mississippi, from both the Amory field and the Jackson field up to September 1, 1932, aggregated 13,044,083,625 cubic feet, according to a compilation made by the Mississippi State Oil and Gas Board.

Of this total the Jackson gas field, discovered February 16, 1930, yielded 12,-161,901,000 cubic feet and the Amory field discovered October 5, 1926, has yielded 882,182,625 cubic feet.

Southeastern States Field Developments

New Operations

JASPER COUNTY — L. Spraragen et al, Bank of Philadelphia 1, cent. se se 35-3n-12e.

Wildcat Drilling Report

(Wells shut down not included)

AMITE COUNTY — Magnolia States O&G Co., Chas. Anderson 1, ne nw 14-3n-3e, dr 650 ft.

HINDS COUNTY—Love & Lancaster, El-

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ton Plantation 1, se se 17-4n-1e, elev 260 ft, top Wilcox 2025 ft, dr 2650 ft, Wilcox sand.

LAMAR COUNTY—Stauffer & Kouri, Trs.' Bond 1, se ne 18-2n-14w, elev 364 ft, arr core, td 3016 ft sandy shale. Dr. Chas. Gorr et al, Jordan 1, nw sw 1-2n-15w, elev 382 ft, dk.

NEWTON COUNTY — Dalton Dev. Co., Majure 1, se se 26-6n-11e, trying drive pipe through quicksand, around 300 ft, td 2000 ft.

ALABAMA

Wildcat Drilling Report

(Wells shut down not included)

LAMAR COUNTY (Vernon)—P. J. McAlpine et al, Gardner 1, nw nw 22-15s-17w, dr sand and slate 3212 ft.

MOBILE COUNTY—J. C. Prine et al, M. & O. Ry. 1, se ne sw 33-2n-4w, dr below 3218 ft.

WASHINGTON COUNTY—South Ala. O. & G. Co., St. Stephens A-1, 26-7n-1w, dr sandy shale 1400 ft.

EASTERN STATES

Field Developments

PENNSYLVANIA

Completions

Company, Well and Location	Initial Production Bbls.	Depth
POTTER COUNTY—		
Hungeville Oil Co., Booth 2	¶7	5088

WEST VIRGINIA

CABELL COUNTY—		
Guyan Valley Gas Co., Read 1	¶1¼	2798
CALHOUN COUNTY—		
Cain & Roth, Jones 1	¶¼	....
C. B. Lewis & Co., Hamilton 1	*	2225
McCall Drilling Co., Garrett 1	10	1940
HANCOCK COUNTY—		
James Crago & Co., Crago 1	*	....
R. J. Braden & Co., Hamilton 13	1	....
WOOD COUNTY—		
Crowley & Carr Oil Co., Mayo 1	*	....

SOUTHEASTERN OHIO

WASHINGTON COUNTY—		
Anderson & Co., Greenlese 9	¶¼	1548

CENTRAL OHIO

ASHLAND COUNTY—		
Stewart & Co., Myers 1	¶¼	592
ATHENS COUNTY—		
Chesmar Oil & Gas Co., Pinkerton 2	¶1¾	1039
GUERNSEY COUNTY—		
George Jewell & Co., Miller 1	58	3668
HOLMES COUNTY—		
Paint Valley Oil & Gas Co., Clinage 1	8	702
MEDINA COUNTY—		
Edson Sons Co., Mong 1	*	390

NORTHWESTERN OHIO

ALLEN COUNTY—		
C. A. & F. J. Peavey, Yant 1	12	....
HANCOCK COUNTY—		
Union Oil Co., Deeds 11	30	....
LUCAS COUNTY—		
Doblinger Bros., Nultz 1	10	1250
SENECA COUNTY—		
Flo B. Horner, Brickner 2	¶¼	....
Flo B. Horner, Brickner 3	¶¼	....
WYANDOT COUNTY—		
Brown & Co., Eckert 1	¶1	1370

ILLINOIS

CRAWFORD COUNTY—		
Roger Dill & Co., Brown 1	*	....

KENTUCKY

CHRISTIAN COUNTY—		
United Petroleum Corp., Clark 1	¶1	....
United Petroleum Corp., Kester 1	¶1½	....
DAVIESS COUNTY—		
Brewer & Thrasher, Hagan 1	*	650
Ellis & Ashby, Taylor 1	*	620

Company, Well and Location	Initial Production Bbls.	Depth
HENDERSON COUNTY—		
Imperial Oil & Gas Products Co., Freeman 4	46	....
HANCOCK COUNTY—		
D. T. Bolling & Co., Morris 1	*	....
Bolling & White, Matthews 4	30	....
Hupp, Duff & Co., Jackson 4	8	....
H. C. Smith, Smith 1	*	....
HART COUNTY—		
Hupp, Duff & Co., Jaggers 17	60	....
Hupp, Duff & Co., Spencer 15	60	....
Beville & Gardenhire, Wintock 1	45	....
KNOX COUNTY—		
Letmer Oil & Gas Co., Himyar Gas Field 2	¶2	....
McLEAN COUNTY—		
Ohio Oil Co., McMamma 4	5	211
OHIO COUNTY—		
D. T. Bolling & Co., Westerfield 1	10	....
B. & B. Oil Co., Greer 5	35	595
PIKE COUNTY—		
West Virginia-Kentucky Gas Co., Bear Fork 1	¶2½	....
United Mineral Dev. Co., Robinson Creek 1	¶3	....

Sinclair Opens Production Office at New Orleans

New Orleans, La.—Sinclair Prairie Oil & Gas Company has opened a land and geological office here, in order better to cover the Gulf Coastal area extending east from Texas to Alabama and Florida. Arch Lorance, formerly in charge of this company's Tyler, Texas, office is in charge. The latter office is still being maintained.

MICHIGAN FIELDS

Midland County Well Makes 1,030 Barrels Initial

Mt. Pleasant, Mich.—Two oil tests in the east pool of the Central Michigan field which made only light oil shows from the Dundee lime have been made into good commercial wells through treating with acid.

Thompson Brothers, Rhemenschnider 1, Midland County, Greendale township, Section 14, at 3560 feet made a light show of oil. After two treatments with acid it made about 60 barrels. The well was

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again run with acid and after being cleaned out and swabbed flowed 390 barrels in 12 hours through tubing, and was completed for 540 barrels a day. The well is continuing to produce from 175 to 325 barrels daily.

Edward Stewart et al's Opperman 3, Midland County, Greendale township, Section 12, after being drilled into the Dundee lime showed some free oil. After the first run of acid the well made 260 barrels of oil the first 24 hours.

Talbot Oil Company's State B-2, Midland County, Greendale township, Section 11, completed for 1030 barrels on initial, was the best "natural" drilled in the field in several weeks. Pure Oil Company completed Bemis Bond 1, same township, Section 14, for 300 barrels initial and the Iosco Land A4 for 450 barrels initial. Same company drilled in Purtell 6 (same township), Section 15 and G-Lee Oil Company drilled in Schaffer 2, Section 12, but neither well flowed.

In the north Isabella field, Vernon township, Mellon-Pollock Oil Company's Lynch 1, showed 600 feet of oil in hole when drilled to 3760 feet, 58 feet in Dundee sand. This well originally was completed at 1385 feet with 1,000,000 cubic feet per day gas production.

J. C. Arthurs Company completed Schugg 3, same township, Section 22, for 45 barrels a day in Dundee at 3773 feet.

Wildcat Tests Announced in Gratiot and Cass Counties

Mt. Pleasant, Mich.—J. G. Tiplady of Detroit has secured a permit to drill a test oil well on the Laycock 1, Gratiot County, Arcada township, SE SE NW Section 11, a wildcat location. There has been some previous exploration in this vicinity showing structure.

Robert S. Anderson of Jones, Michigan, has taken out a permit to drill a test well in Cass County, north Porter township, Section 29, also a wildcat.

Expect Early Rulings on Michigan Gas Line Permits

Mt. Pleasant, Mich.—The probability of an early decision by the Michigan Public Utilities Commission on applications before it for articles of convenience and necessity to build natural gas pipe lines from the Central Michigan gas fields to different cities of the state, is now assured with the withdrawal October 8 of the ap-

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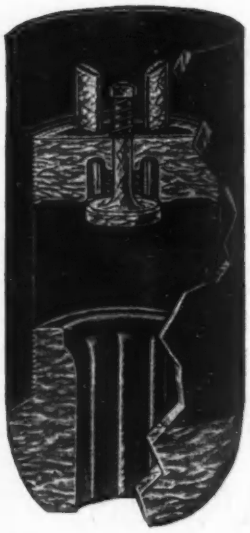

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plication of Peninsular Construction Company of Detroit, whose application had yet to be heard by the commission.

Thomas M. Currie, head of Peninsular Construction Company, notified the commission that his company was withdrawing its application and this action leaves only the petitions of Michigan Natural Gas Corporation and Michigan Natural Pipeline Company, with its affiliated corporation, West Michigan Gas Company, up for decision.

Michigan Field Developments

Completions

Company, Well and Location	Initial Production Bbls.	Depth
ISABELLA COUNTY—		
J. C. Arthurs Co., Schugg 3, Vernon Twp., e s sw Sec. 22	45	3773
Geo. C. Hanners, Welch 1	*	....
MIDLAND COUNTY—		
Pure Oil Co., Bemis-Bond 1, Greendale Twp., ne ne nw Sec. 14	300	3560
Isoco-Land A 4, Greendale Twp., w½ nw¼ Sec. 16	450	3576
Ed. Stewart et al, Opperman 3, Greendale Twp., nw nw se, Sec. 12	256	3556
Talbot Oil Co., State B-2, Greendale Twp., se se se, Sec. 11	1030	3549
Thompson Bros., Rhemenschnider 1, Greendale Twp., Sec. 14	540	3560
Michigan O&G Corp., Bond 2	100	....
Wellman Oil Co., Bolan 2	550	....
Columbia O&G Co., McLaughlin 1	250	....
Columbia & Gordon Oil Co., Talker 1	*	....
Thompson Bros., Newland 1	*	....
MISSAUKEE COUNTY—		
Pioneer G&O Co., Porter Ranch 1	*	....
Miller 1	*	....

New Operations

ISABELLA COUNTY—C. F. White, Dennis et ux 1, Chippewa Twp., se se nw Sec. 3.

GRATIOT COUNTY—J. G. Tiplady, Laycock 1, Arcada Twp., se se nw Sec. 11.

CASS COUNTY—Robert S. Anderson, Conkright et al 1, North Porter Twp., Frac. sw¼, Sec. 29.

MUSKEGON COUNTY—H. and W. Feicke, H. and W. Feicke 2, Fruitland Twp., se sw se, Sec. 1.

Wildcat Drilling Report

(Wells shut down not included)

MIDLAND COUNTY—Pure Oil Co., Yost et al 1, Greendale Twp., Sec. 35, dr 1250 ft. Theodore Oil Co., McBain 1, Greendale Twp., Sec. 1, dr 1200 ft. Pacific Oil and Gas Co., Hoyt 1, Jasper Twp., Sec. 24, sd, waiting cas. Michigan Gas and Oil Co., Rayner 1, Lee Twp., Sec. 6, dr 3100 ft.

CLARE COUNTY — Theodore Oil Co., Thompson Bros. 1, Greenwood Twp., Sec. 35, dr 1900 ft.

ISABELLA COUNTY — E. S. Hammond, Graham 1, Chippewa Twp., Sec. 22, dr 900 ft.

OCEANA COUNTY—Varner and Lockwood, Flood 1, Pentwater Twp., Sec. 34, sd 500 ft, wo repairs. A. S. Cochran, Hannum 1, Elbridge Twp., Sec. 31, drive pipe, 100 ft. L. E. DuVall, Walace 1, Elbridge Twp., Sec. 34, sd 400 ft, wo pipe. Johnson Oil Refining Co., Sippy 2, Leavitt Twp., Sec. 24, drv pipe 300 ft.

LIVINGSTON COUNTY—H. Snell et al, Zebb 1, Genoa Twp., Sec. 34, dr 1900 ft.

NEWAGO COUNTY—Hesperia Petroleum Co., Jones 1, 14n-14w, Sec. 20, dr 2200 ft.

SAGINAW COUNTY — Smith Petroleum Co., Pollett 1, Birch Run Twp., Sec. 29, dr 1600 ft.

MACOMB COUNTY—H. H. Brown, Bower 1, Chesterfield Twp., Sec. 29, drv pipe.

Squeaks *from the* BULL WHEEL

A member of congress was very much impressed with the dignity of his position, and it was always on his mind. One night his wife awakened him and whispered:

"John, there are burglars in the house."

"You must be mistaken, my dear," he answered. "There may be a few in the senate, but in the house—oh, no; the idea is preposterous."

Husband (arriving home late): "Can't you guess where I've been?"

Wife: "I can; but go on with your story."

Two lady school teachers spending their vacations exploring western Canada stopped at a small and old-fashioned hotel in Alberta. One of the pair, inclined to be worrisome when traveling, couldn't rest until she had made a tour of the corridors to hunt out exits in case of fire. The first door she opened, unfortunately, turned out to be that of the public bath, occupied at the moment by a gentleman taking a shower. "Oh, excuse me!" the lady stammered, flustered. "I'm looking for the fire escape." Then she ran for it. To her dismay, she hadn't got far along the corridor when she heard a shout behind her and, looking around, saw the gentleman, wearing only a towel, running after her. "Where's the fire?" he hollered.

"And how is your husband getting on with his reducing exercises?"

"You'd be surprised—that battleship he had tattooed on his chest is now only a rowboat."

A fisherman was looking for a frog for bait, and spied a snake which had just caught a frog. He tried unsuccessfully by prodding and other means to make the snake release its prey; finally he pulled out a flask and poured a little liquor in the snake's mouth. The snake dropped the frog and slithered away.

Some time later the fisherman was again needing bait. As he started to hunt, he felt a tug at his trousers, and found the snake, looking up expectantly—another frog in his mouth.—*Staley Journal.*

An old negro who had spent many years in a wheel chair wanted to go on one last coon hunt before he died. So he and his grandchildren, accompanied by several dogs, started out.

Hardly had they penetrated the swamp when they met a bear. All turned tail and ran, leaving poor grandpap to his fate.

As they came panting into the yard they called: "Oh, mammy, mammy, grandpap done got et up by a b'ar."

"Foolishment what yo' speaks, chillen. Yo' grandpap done come in five minutes ago wid the dogs!"

Reporter: Why do you use that blue pencil so much, Uncle Pat?

Uncle Pat: Well, to make a long story short I use it to make long stories short.

"My feet burn like the dickens; do you think a mustard bath would help?"

"Sure! There's nothing better than mustard for hot dogs!"

"Harry was held up last night by two men."

"Where?"

"All the way home."

Mac, the Scot, reaching into his hip pocket for his handkerchief, accidently pulled out a set of false teeth.

"Faith and begora, Mac," said Pat, "but why don't you wear your teeth in your mouth?"

"These are my wife's," said Mac, "I went home early the other afternoon and found her eating between meals."

"There seems to be an affinity between a negro and a chicken. I wonder why?"

"It's natural enough. One is descended from Ham and the other from eggs."

"What's the best exercise for reducing?"

"Just move the head slowly from right to left when asked to have a second helping."

The "cullud" lady gave her name, her address, and her age; and then the clerk of registration asked this question:

"What party are you affiliated with?"

"Does I have to answer dat?"

"That is the law."

"Den you just scratch my name offen de books. Ef I got to tell dat party's name, ah don' vote, das all. Why, he ain't got his divorce yit."

"We are now passing the most famous brewery in Berlin," announced the guide.

"The hell we are!" shouted the American tourist, as he hopped off the sightseeing bus.

The Colonel: "I just crept out and shot the elephant in my pajamas."

Little Girl: "But, Colonel, how did the elephant get in your pajamas?"

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NEWS *from the* *Industry's* EQUIPMENT MAKERS

U. S. Thermo Meter Company, 8811 West Third Street, Los Angeles, California, has taken over domestic sales for the American Liquid Meter Company, manufacturers of Bassler liquid meters, designed for uses in connection with producing, pipe line, storage, tank wagon, and gasoline pump meterings.

Maintenance Engineering Corporation, Houston, Texas, announces the appointment of A. J. Hooper as sales engineer. Mr. Hooper is a graduate of Tulane University, in chemical engineering and has been connected with the technology department of the Shell Petroleum Corporation, Houston, for the past three years.

Mission Manufacturing Company, Houston, Texas, announces the appointment of George Luck in the capacity of conducting field tests on new products. Mr. Luck was formerly with the Reed Roller Bit Company.

Petroleum Equipment Company and Oil Field Engineering Company, Ft. Worth, Texas, jointly announce appointment of Oil Field Specialty Company of Houston to warehouse stocks of these two manufacturers for the jobbing and retail trade in the Gulf Coast. Oil Field Specialty Company is located at 2301 Commerce Street, Houston, Texas.

CATALOGS BULLETINS

Helpful Publications Which Manufacturers Will Be Glad to Send Free for the Asking.

Jacks

The Joyce-Cridland Company, Dayton, Ohio, has ready for distribution a 24-page catalog of descriptions and specifications covering lifting and lowering equipment and featuring the special "Oilfield Emergency Jack."

Derricks

Emsco Derrick & Equipment Company, Los Angeles, California, has released for distribution a 16-page, illustrated booklet titled "Emsco Series K Derricks," which title explains the contents.

The Jeffrey Manufacturing Company, Columbus, Ohio, has announced the removal of its southwestern branch office from Houston to Dallas, Texas. Mr. T. P. Burke continues as manager.

Pipe Boom

The Trackson Company, Milwaukee, Wisconsin, has available for distribution an attractive, illustrated circular, "New Speed and Power for Pipe Handling," describing a combination of the Trackson McCormick-Deering crawler tractor and the highway boom.

Louisiana Bulletin

The Louisiana Department of Conservation, New Orleans, announces publication of Geological Bulletin No. 2, entitled "Foraminifera of the Jackson Eocene at Danville Landing on the Ouachita, Catahoula Parish, Louisiana." The volume was prepared for the bureau by Dr. H. V. Howe, director of the school of geology, Louisiana State University, and William E. Wallace, of the same school.

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